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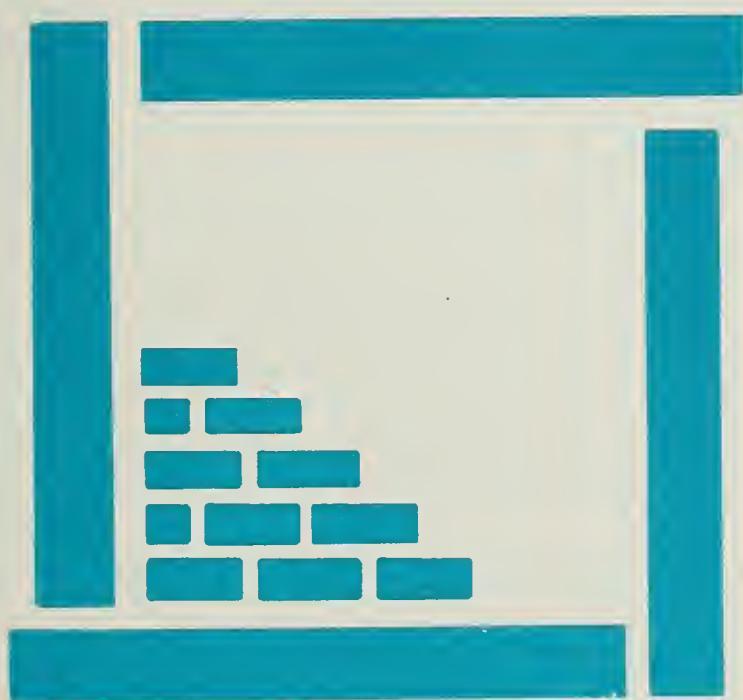
ensus of onstruction Industries

CC87-I-23

INDUSTRY SERIES

Excavation Work Special Trade Contractors

Industry 1794



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This report was prepared in the Construction Statistics Division. **Barry A. Rappaport**, Assistant Division Chief for Industry Surveys, was responsible for the overall planning, management, and coordination of the census of construction industries. Planning and implementation were under the direction of **A. William Visnansky**, Chief, Census Operations Branch, with primary staff assistance by **Juliana Van Berkum**, **Barbara J. Hadden**, **Edward R. Glover**, **Susan L. Hostetter**, **Shirley M. Baker**, and **Carolyn J. Stone**. Under the direction of **Jesse Pollock**, **Edward K. Ricketts** and **Dennis K. Duke** developed the sampling plans and variance and estimation specifications.

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If you have any questions concerning the statistics in this report, call (301) 763-7546.

1987

Census of

Construction Industries

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Issued January 1990



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PURPOSE AND USES OF THE ECONOMIC CENSUSES

The economic censuses are the major source of facts about the structure and functioning of the Nation's economy. They provide essential information for government, business, industry, and the general public.

Economic censuses furnish an important part of the framework for such composite measures as the gross national product, input-output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions.

Policy-making agencies of the Federal Government use the data, especially in monitoring economic activity and providing assistance to business.

State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.

Trade associations study trends in their own and competing industries, and keep their members informed of market changes.

Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

AUTHORITY AND SCOPE

Title 13 of the United States Code (sections 131, 191, and 224) directs the Census Bureau to take the economic censuses every 5 years, covering years ending in 2 and 7. The 1987 Economic Censuses consist of the—

Census of Retail Trade
Census of Wholesale Trade
Census of Service Industries
Census of Transportation
Census of Manufactures
Census of Mineral Industries
Census of Construction Industries

Special programs also cover enterprise statistics and minority-owned and women-owned businesses. (The 1987 Census of Agriculture and 1987 Census of Governments are conducted separately.) The next economic censuses are scheduled to be taken in 1993 covering the year 1992.

AVAILABILITY OF THE DATA

The results of each of the economic censuses are available in printed reports, for sale by the U.S. Government Printing Office, and on microfiche, computer tape, compact discs with read-only memory, and flexible diskettes, for sale by the Census Bureau. Order forms for all types of products are available on request from Customer Services, Census Bureau, Washington, DC 20233. A more complete description of publications being issued from this census is on the inside back cover of this document.

Census facts are also widely disseminated by trade associations, business journals, and newspapers. Volumes containing census statistics are available in most major public and college libraries. Finally, State Data Centers in every State and Business and Industry Data Centers in many States also supply economic census statistics.

WHAT'S NEW IN 1987

Several changes have taken place for the 1987 censuses. Data will be reported on the basis of the newly revised Standard Industrial Classification (SIC) system with selected reports including "bridge tables," linking the old and new classification systems. A new set of metropolitan

areas has been adopted, and more detailed information will be available for businesses with no paid employees. For additional information on these changes, review the subsequent text.

One important change involves receipts of contractors and builders. Prior to 1987, the Census of Construction Industries collected receipts as the primary measure of construction activity. For 1987, the census collected the "value of construction work done" to better measure actual construction activity done during the year. Differences between the two concepts occur when work is done in one year and payment received either from the prior or in the succeeding year. In addition, receipts do not include work a contractor performs for its own account and use.

HISTORICAL INFORMATION

The economic censuses have been taken together as an integrated program at 5-year intervals since 1967, and before that for 1963, 1958, and 1954. Prior to that time, the individual censuses were taken separately at varying intervals.

The economic censuses trace their beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for 1840 and subsequent censuses to include mining and some commercial activities. In 1902, Congress established a permanent Census Bureau and directed that a census of manufactures be taken every 5 years. The 1905 manufactures census was the first time a census was taken apart from the regular every-10-year population census.

The first census of business was taken in 1930, covering 1929. Initially it covered retail and wholesale trade, and construction industries, but it was broadened in 1933 to include some of the service trades.

The 1954 economic censuses were the first to be fully integrated—providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. These were the first censuses to be taken by mail, using lists of firms provided by the administrative records of other federal agencies. Since 1963, administrative records have also been used to provide basic statistics as well for very small firms, reducing or eliminating the need to send them census questionnaires. The Enterprise Statistics Program, which publishes combined data from the economic censuses, was made possible with the implementation of the integrated census program in 1954.

The range of industries covered in the economic censuses has continued to expand. The Census of Construction Industries began on a regular basis in 1967, and the scope of service industries was broadened in 1967, 1977, and 1987. The Census of Transportation began in 1963 as a set of surveys covering travel, transportation of commodities, and trucks. New for 1987 are publications reporting on business establishments engaged in several transportation industries, paralleling the data on establishments in

other sectors. This is part of a gradual expansion in coverage of industries previously subjected to government regulation. The Survey of Minority-Owned Business Enterprises was first conducted as a special project in 1969 and was incorporated into the economic censuses in 1972 along with the Survey of Women-Owned Businesses.

Economic censuses have also been taken in Puerto Rico since 1909, in the Virgin Islands and Guam since 1958, and in the Northern Mariana Islands since 1982.

Statistical reports from the 1982 and earlier censuses provide historical figures for the study of long-term time series, and are available in some large libraries. All of the census data published since 1967 are still available for sale on microfiche from the Census Bureau.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

While the censuses provide complete enumerations every 5 years, there are many needs for more frequent data as well. The Census Bureau conducts a number of monthly, quarterly, and annual surveys, the results of which appear in publication series such as *Current Construction Reports* (building permits, housing starts, and value of new construction put in place), *Current Business-Reports* (retail and wholesale trade and service industries), the *Annual Survey of Manufactures*, *Current Industrial Reports*, and the *Quarterly Financial Report*. Most of these surveys, while providing more frequent observations, yield less kind-of-business and geographic detail than the censuses. The *County Business Patterns* program offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1987 Economic Censuses and Related Statistics*. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1987 Economic Censuses*. Contact Customer Services for information on availability.

CENSUS OF CONSTRUCTION INDUSTRIES—SCOPE AND CLASSIFICATION

The 1987 Census of Construction Industries covers all employer establishments (establishments with payroll) primarily engaged in contract construction, construction on their own account for sale, or in subdividing real property

into lots as defined in the 1987 Standard Industrial Classification (SIC) Manual.¹ This industrial classification system has been developed by experts on classification in government and private industry under the guidance of the Office of Management and Budget and is in general use among government agencies and among organizations outside the government.

Contract construction—The SIC manual defines construction in three broad types of activity that follow:

- 1. Building construction by general contractors or by operative builders**—General building contractors are primarily engaged in the construction of dwellings, office buildings, stores, farm buildings, and other building projects. Operative builders who build on their own account for sale are also included here. However, investment builders who build structures on their own account for rent are classified in Real Estate.
- 2. Heavy construction general contractors**—Heavy construction general contractors are primarily engaged in the construction of highways, bridges, pipelines, sewers and water lines, marine construction, power, and petro-chemical plants and other nonbuilding construction projects. Special trade contractors are classified in heavy construction if they are specifically engaged in the following activities: grading for highway and airport runways; guardrail construction; installation of highway signs; asphalt and concrete construction of roads, highways, streets and public sidewalks; trenching, cable laying; conduit construction; underwater rock removal; pipeline wrapping; or land clearing and leveling.
- 3. Construction by other special trade contractors**—These contractors include plumbers, painters, carpenters, electricians, brick layers, roofers, etc. For the most part, they perform their work at the site of construction, although they may also have shops where they perform work incidental to the job site.

General contractors in both the building and the heavy construction field usually assume responsibility for an entire construction project, but may subcontract to others all of the actual construction work or those portions of the project requiring special skills or equipment. Special trade contractors may work for general contractors, for other subcontractors, or may work directly for the owner of the property.

In addition to the industries classified in the SIC manual as Construction, this census also includes one industry

classified in the Real Estate area, SIC 6552, Land Subdividers and Developers, Except Cemeteries. These establishments are engaged in subdividing real property into lots and in developing it for sale on their own account.

Each establishment receiving a questionnaire was requested to report the percent of total dollar value of business done for each kind-of-business activity engaged in during 1987. This information was used for the computer assignment of appropriate industry classifications. During this work, various tests were also made using other data reported on the questionnaire. The proportion of construction work to total business was checked to verify that the establishment was primarily in construction. Also taken into consideration were the types of structures worked on during the year and the extent of work undertaken for other contractors.

Construction establishments often engage in various construction activities. It is necessary, however, to assign a single industry code to the establishment based on its major activity. Therefore, the statistics shown for an industry reflect not only the primary activity of the establishments in the industry, but also their secondary activities. The industry reports, however, do present data on the extent of secondary activities.

A revised edition of the SIC Manual was issued in 1987. Minor modifications were made to three industries in the construction sector: SIC 1611, Highway and Street Construction Contractors, Except Elevated Highways; SIC 1629, Heavy Construction Contractors, N.E.C.; and SIC 1771, Concrete Work Special Trade Contractors. The extent of these modifications are explained in the specific texts for those industries. "Bridge tables" are also included showing selected data tabulated using both the previous classification system and the 1987 revision.

ESTABLISHMENT BASIS OF REPORTING

The census of construction industries is conducted on an establishment basis. A "construction establishment" is defined as a relatively permanent office or other place of business where the usual business activities related to construction are conducted. With some exceptions, a relatively permanent office is one which has been established for the management of more than one project or job and which is expected to be maintained on a continuing basis. Such "establishment" activities include, but are not limited to estimating, bidding, purchasing, supervising, and operation of the actual construction work being conducted at one or more construction sites. Separate construction reports were not required for each project or construction site.

Companies with more than one construction establishment were required to submit a separate report for each such establishment operated during all or any part of 1987. The census of construction industries figures represent a summary of records for individual establishments rather than for companies. The census tabulations, therefore, differ from those prepared on a company basis.

¹Standard Industrial Classification Manual: 1987. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

If an establishment engaged in construction and one or more distinctly different lines of economic activity (wholesale or retail trade, service, manufacturing, mining, etc.) at the same place of business, it was requested to file a separate report appropriate to each activity, provided that the activity was of substantial size and separate records were maintained or substantially accurate estimates could be prepared.

If a separate establishment report could not be prepared for each activity, then a construction report was requested covering all activities of that establishment providing that the 1987 value of construction work exceeded the gross receipts from each of its other activities.

Construction businesses with no payroll during 1987 (nonemployers) were not required to file census reports. Tabulation of data for these businesses are based on administrative records and are shown only in U.S. summary publications and the geographic area reports series. Refer to the section on "Sample Design" for details. Foreign construction activities were not included in this census.

SAMPLE DESIGN, ESTIMATION PROCEDURES, AND RELIABILITY OF ESTIMATES

The companies included in the 1987 Census of Construction Industries were identified as part of an operation common to all 1987 Economic Censuses. Construction companies were divided into employers (companies with payroll) and nonemployers (companies without payroll). Statistical information for the employers was obtained in the census by a survey which included all medium size and large employers and a sample of the smaller ones. Census reports were not required from the nonemployers. Statistics on them were obtained from administrative records of other agencies of the Federal Government.

Employer Companies

Developing the sampling frame for employer companies—This operation started with obtaining a list of all construction companies in the active records of the Internal Revenue Service (IRS) which were subject to payment of Federal Insurance Contributions Act taxes. The basic source for this list has been the Internal Revenue Service Business Master File, a comprehensive list of companies engaged in business activities in the United States. The file contains the name, address, and form of ownership of each company and also indicates whether or not the company is subject to the FICA. Each company in this file is assigned a unique employer identification (EI) number which it uses in filing its various reports with the IRS. The Social Security Administration (SSA) maintains a similar list using the same identification numbers, which also contains information on the industrial classification of each company. The Bureau of the Census obtained both of these lists and combined them.

Under special arrangements which safeguarded the confidentiality of the information, the Bureau also obtained administrative records data on payrolls and receipts and added these data to the combined list. The list, thus created from the IRS-SSA information, was a list of employer companies. However, for the 1987 Economic Censuses the basic reporting unit is the "establishment." Therefore, steps were taken to identify the individual establishments of those companies which operate more than one place of business. The information for making this determination was obtained by means of the Company Organization Survey (COS), an annual canvass of all known multiestablishment companies and large single-establishment companies. Thus, the 1987 Economic Census list for single-establishment employer companies was obtained from the IRS-SSA, but the list of establishments of multiestablishment employer companies was obtained directly from those companies in the COS. Refer to the section on "Establishment Basis for Reporting" for details.

In general, the IRS-SSA list provided sufficient industrial classification data to assign a company to the proper economic census, but there were a number of companies for which this information was inadequate or unavailable. A special form, NC-9923, General Schedule, was mailed to all such companies, requesting information on the nature of the company's activities. From the information reported, the company was given an industrial classification code and assigned to the appropriate economic census. Since construction companies found in this way were identified only after the regular census mailing had taken place, they were treated as a supplement to the basic list.

Selecting the employer sample—The sample was designed to provide reliable State and metropolitan area estimates for each construction industry. It consisted of all construction establishments in multiestablishment companies, all single-establishment companies with estimated total employment of 20 employees or more, and a probability sample of single-establishment companies with estimated employment of fewer than 20 employees.

Supplementing the sample were construction companies identified from the NC-9923, General Schedule. Also affecting the sample were the misclassified companies; i.e., companies included in the samples of other trade areas which reported they were construction companies and companies originally classified in construction which reported they were not construction companies.

Of the 533,000 single-establishment employer companies initially classified as construction companies, 147,000 were included in the sample. All of the 13,000 establishments of multiestablishment companies were included in the sample. There was a net increase in the sample of 60,000 establishments resulting from establishments originally unclassified (receiving the NC-9923) or misclassified.

The probability sample of the smaller single-establishment companies was a stratified random sample. Strata were formed from all establishments with the same initial four-digit SIC code, in the same State, in the same metropolitan

area or in the balance of the State, and in the same size class based on estimated total employment. If the four-digit SIC code for an establishment was incomplete, the establishment was placed in a stratum for miscellaneous companies. Because they were small, all companies were included in the sample for the following three industries: SIC 1622, Bridge, Tunnel, and Elevated Highway Construction Contractors; SIC 1795, Wrecking and Demolition Work Special Trade Contractors; and SIC 1796, Installation or Erection of Building Equipment Special Trade Contractors.

Estimation procedures for 1987 and 1982 data— Since all larger employer companies and some smaller ones were included in the census, sample estimation was required only for the universe of companies not selected with certainty. The published statistics are the totals of the estimates for the sampled companies and the aggregates for the certainty companies. All estimates for 1987 and 1982 published here are simple unbiased estimates of the form:

$$x'_c = \frac{\sum x_i / p_i}{n_c}$$

$$i = 1$$

where: x'_c is the simple unbiased estimate of a characteristic for a publication cell.

x_i is the reported value of a characteristic for an individual establishment in the publication cell.

p_i is the selection probability of that firm.

n_c is the number of firms in the sample for the cell.

Data for certain characteristics were reported as a percentage of the dollar value of business done. Before this formula was applied to those characteristics, it was necessary to convert the reported percentages into dollars.

Reliability of employer statistics— Since the estimates for employer establishments in these reports are based on the samples, they are subject to sampling variability and may be expected to differ from results which would have been obtained if a complete census had been taken using the same forms and procedures. The sampling errors shown in the tables were estimated directly from the sample reports, using methods appropriate for the sample design and form of estimation used.

The relative standard error is a measure of sampling variability, i.e., the variation that might occur by chance because only a sample of the population is surveyed. As calculated for this report, the relative standard error also partially reflects the effect of random errors of response and processing, but it does not take into account the effect of any consistent biases due to those types of errors. The chances are about 68 out of 100 that an estimate from the

sample would differ from a complete census by less than the relative standard error. The chances are about 95 out of 100 that the difference is less than twice the relative standard error and about 99 out of 100 that it is less than 2-1/2 times the relative standard error. Individual estimates with large relative standard errors have been shown in the published tables. Any such estimates should be used with caution. The very large relative standard errors generally occur for the smaller estimates.

Relative standard errors have been calculated for all of the published statistics, although they are shown for each statistic only in the tables presenting detailed statistics. Other tables show relative standard errors only for certain characteristics because of lack of space.

As calculated for this report, the relative standard error measures certain nonsampling errors, but does not measure any systematic biases in the data. Bias is the difference, averaged over all possible samples with the same size and design, between the estimates and the true value being estimated. Nonsampling errors can be attributed to many sources: inability to obtain information about all cases in the sample; definitional difficulties; differences in interpretation of questions; inability or unwillingness of respondents to provide correct information; and errors made in processing the data. Although no direct measurements of the biases have been obtained, it is believed that most of the important response and operational errors were detected in the course of reviewing the data for reasonableness and consistency.

A potential source of bias is in the imputation for those establishments that have not responded by the time of final publication. Data were estimated for establishments that did not report by that date, although selected establishments were contacted again to obtain as much information on the telephone as possible. Some publication cells in which more than 40 percent of the data were not reported have been suppressed.

Nonemployer Companies

As described earlier, the information derived from the business income tax returns of all companies was matched to the census employer file on the basis of common identification numbers. Those business income tax returns which could not be matched, were further classified on the basis of several characteristics. Returns with characteristics consistent with companies without payroll were treated as nonemployers. The nonemployer construction companies were not required to file census reports.

For "number of establishments," each separate income tax return was assumed to be an establishment. "All business receipts" was based on receipts information reported on the tax return.

Since no sampling was involved in the nonemployer establishments, the statistics for nonemployers are not subject to sampling variability. However, these data are subject to an unknown amount of reporting and processing errors which could not be detected by the Census Bureau.

CENSUS REPORT FORMS

Information for the 1987 Census of Construction Industries was obtained from employer establishments primarily through the use of twenty-four questionnaires, determined by industry classification and size. Standard forms and short forms were developed for each of the following SIC groups: 15, 16, 171, 172, 173, 174, 175, 176, 177, 178, and 179 and for the establishments classified in SIC 6552. Establishments with 50 or more employees all received the standard form. A sub-sample of establishments with fewer than 50 employees received short forms instead of the standard forms. The short forms covered only major items and omitted some of the detail found in the longer forms.

In reviewing and developing the questionnaires, comments and recommendations were elicited from construction trade associations and appropriate advisory groups. The Bureau surveyed several thousand firms representing all economic activities to gain insight into the way companies maintain records and to see whether new information could be collected.

DATA PROCESSING

The 1987 census report forms were mailed out in December 1987. They were mailed from and returned to the Census Bureau's Data Preparation Division in Jeffersonville, Ind., where routine editing and coding of the report forms were also accomplished. Collection of these report forms was essentially completed in July 1988.

The returned reports underwent extensive processing. A preliminary edit done at the time of data entry identified obviously deficient reports and reports needing clarification. When necessary, these problems were resolved by further contact with the respondents. Next, the data were transmitted to Census Bureau headquarters near Washington, DC.

Data records, then, underwent a detailed computer review and analysis. The records containing significant problems were referred for further analytical review and, if necessary, contacts were made with the respondents. The computer performed most classification coding (such as industry coding, geographic coding, and size coding), and imputation for missing items or for reports not received in time for tabulation. The imputation was performed on an industry (or industry group)-State (or geographic group) basis using all available response and administrative data.

The data records were then tabulated on an industry basis. Industry totals were subjected to analytical review, and selected statistics were prepared for the preliminary reports. Corrections resulting from this review were made to the computer records and final tabulations were produced.

The review of a preliminary report for an industry often uncovered the need for corrections or revisions to the data for another industry for which a preliminary report had already been published. The final reports incorporate all

revisions and corrections made during the review of the preliminary reports and contain considerable more data than were published in those reports.

GEOGRAPHIC CLASSIFICATION

Information for the 1987 Census of Construction Industries' final industry report series is classified on the basis of two types of geographic distributions: (1) physical location of the establishment, and (2) location of construction work. A separate code was assigned on each basis allowing us to present data by both physical locations of the establishment and location of construction work.

The geographic area reports series presents similar data by industry for each State (physical location of the establishment) and for selected MSA's, CMSA's and PMSA's.

DUPLICATION IN VALUE OF CONSTRUCTION WORK

The aggregate of value of construction work reported by all construction establishments in each of the several industry, geographic area, or other groupings in this census, contains varying amounts of duplication, since the construction work of one firm may be subcontracted to other construction firms and also be included in the subcontractors' value of construction work. To avoid this duplication, a "net" value of construction work figure has been derived for each establishment by subtracting the costs for construction work subcontracted to others from the value of construction work.

Duplication in value of business between other construction and nonconstruction industries, results from the use of products of these other industries as input materials by construction establishments. "Value added," avoids this duplication and is, for most purposes, the best measure for comparing the relative economic importance of industries or areas. "Value added," is defined in the 1987 Census of Construction Industries as equal to dollar value of business done less costs for construction work subcontracted to others and payments for materials, components, supplies, and fuels. However, for SIC 6552 and SIC 1531 where land receipts are significant, land receipts are also subtracted from dollar value of business done.

SPECIAL TABULATIONS

Special tabulations of data collected in the 1987 Census of Construction Industries may be obtained on computer tape or in tabular form. The data will be in summary form and subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) as are the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact and detailed specifications of the type and format of the data to be provided, should be directed to the Chief, Construction Statistics Division, Bureau of the Census, Washington, DC, 20233.

To discuss a special tabulation before submitting specifications, call 301-763-7546.

COMPARABILITY OF CENSUS OF CONSTRUCTION INDUSTRIES DATA WITH OTHER DATA

Data contained in the reports of the 1987 Census of Construction Industries are not the same as the data published in the Census Bureau's monthly Construction Reports, Series C30, Value of New Construction Put in Place. The main difference is that the C30 series covers all new construction put in place without regard to who is performing the construction activity, whereas the construction census figures cover both new construction and maintenance and repair work done by establishments classified in the construction industry. Significant amounts of construction are done by establishments classified outside of construction (in real estate, manufacturing, utilities and communications, for example), both as "force account" construction and construction done for others. In addition, the value in place series includes construction-related expenses such as architectural and engineering costs and the costs of materials supplied by owners which are normally not reflected in the Census of Construction.

Data contained in the reports of the census of construction industries may also differ from industry data in "Employment and Earnings Statistics," published by the Bureau of Labor Statistics, and "Statistics of Income," published by the Internal Revenue Service. These differences arise from varying definitions of scope, coverage, timing, classification, and methodology.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in this publication:

*	Sampling error exceeds 40 percent.
**	Represents the sum of all employees during pay periods including 12th of March, May, August, and November, divided by 4.
-	Represents zero.
†	Represents value of construction work less costs for construction work subcontracted to others. (See Duplication in Value of Construction Work.)
††	Represents dollar value of business done less costs for construction work subcontracted to others, and costs for materials, components, supplies, and fuels. In SIC's 1531 and 6552, land receipts are also subtracted from dollar value of business done. (See Duplication in Value of Construction Work.)
(D)	Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
(NA)	Not available.
(S)	Withheld because estimate did not meet publication standards on the basis of either the response rate, associated relative standard error, or a consistency review.
(W)	Greater than zero but less than 1 percent.
(X)	Not applicable.
n.s.k.	Not specified by kind.

Users' Guide for Locating Statistics in This Report by Table Number

Statistics	For U.S.	By State	By employment size	By size class of dollar value of business done	By type, class, ownership, kind of business, and location of construction ¹	By specialization in types of construction
Assets and depreciation (gross book value):						
Beginning of year—buildings, machinery and equipment.....	3					
End of year—total.....	1, 3	1	5	6		
End of year—buildings, machinery and equipment.....	3					
Depreciation charges during year— buildings, machinery and equipment.....	3					
Capital expenditures:						
Total capital expenditures	1, 3	1	5	6		
New buildings—machinery and equipment	3					
Used buildings—machinery and equipment.....	3					
Communication services, costs for	2					
Employees:						
All employees—average number	1, 2	1	5	6		
Construction workers—average number.....	1, 2, 9	1, 9				8
Other employees—average number	2					
Employer costs for fringe benefits—legally required and voluntary expenditures	2					
Establishments—number in business during year	1, 2, 4, 9	1, 9	5	6		8
Hours—construction workers:						
Total.....	1, 2, 9	1, 9	5	6		
Quarterly	2, 9	9				
Inventories	4					
Materials, components, supplies, and fuels—costs for	1, 2	1	5	6		
Payroll:						
First quarter, all employees.....	2					
Annual:						
All employees.....	1, 2	1	5	6		
Construction workers	1, 2	1				
Other employees.....	2					
Power, fuels, and lubricants—costs for.....	2					
Proprietors and working partners.....	2					
Ratios, State.....	13	13				
Value and receipts:						
Dollar value of business done, total	2		5	6		
Value of construction work, total	1, 2, 4	1	5	6	2, 7, 10	8
For work subcontracted in from others.....	2					
Other business receipts and land receipts ²	2					
Net value of construction work.....	1, 2	1	5	6		8
Value added.....	1, 2	1	5	6		8
Rental costs:						
Total.....	1, 2	1	5	6		
For machinery and equipment	2					
For buildings.....	2					
Repairs to buildings and other structures.....	2					
Repairs to machinery and equipment.....	2					
Selected industry ratios	12					
Subcontract work to others, costs for.....	1, 2	1	5	6		8

Note: Data for 1982 and earlier years are also available in some of these tables.

¹Type—buildings, roads, etc. Class—new construction; additions, alterations, or reconstruction; or maintenance and repair work. Ownership—private or government owned.

²Land receipts are shown separately for SIC's 1531 and 6552 only.

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Statistics for Establishments Without Payroll appear in the U.S. Industry Summary Report.

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SUMMARY OF FINDINGS

Establishments classified in this industry are primarily engaged in excavation work and digging foundations, including digging and loading. Contractors in this industry may also perform incidental concrete work. Contractors primarily engaged in concrete work are classified in Industry 1771, Concrete Work Special Trade Contractors. Contractors primarily engaged in trenching or in earth moving and land clearing not related to building construction are classified in Industry 1629, Heavy Construction Contractors, Not Elsewhere Classified. For additional examples, refer to the 1987 Standard Industrial Classification (SIC) Manual published by the Office of Management and Budget, Executive Office of the President.

During 1987, the establishments with paid employees classified in this industry accounted for \$8.5 billion in total dollar value of business. Of this amount, \$8.2 billion were for the value of construction work. These establishments paid out \$1.6 billion for materials, components, and supplies and \$753 million for construction work subcontracted to others. Costs for selected power, fuels, and lubricants for this industry were \$408 million. Value added for 1987 was \$5.7 billion.

There were 13,422 establishments with total employment averaging 95,329 during the year. Total payroll for 1987 was \$2.1 billion. Total hours worked by construction workers during the year were 137 million hours.

Larger establishments with 20 employees or more, while representing only 7 percent of the total number of employer establishments in this industry accounted for 52 percent of all business done.

A "construction establishment" is defined as a relatively permanent office, or other place of business, where the usual business activities related to construction are conducted. A separate census report was required from each sampled establishment covering domestic operations. Separate reports were not, however, required for each project or construction site.

In 1987, the value of construction work was collected to better measure actual construction activity done during the year. Construction receipts, as reported in earlier censuses, may have included the value of work done before or after the calendar year and may have excluded the value of work in progress during the calendar year. Receipts may have also excluded work done by builders engaged in construction for sale on their own account or for their own use. All dollar values are shown in current dollars for the years specified and have not been adjusted for inflation.

The data in this report are estimated from a sample survey and are subject to sampling variability as well as errors of response and nonreporting. The relative standard error shown in the tables is a measure of sampling variability. Descriptions of the sampling, estimating procedures, and data reliability are included in the Introduction.

Figure 1. **Value of Construction Work by Type of Construction**

(Percent)

1987 
1982 

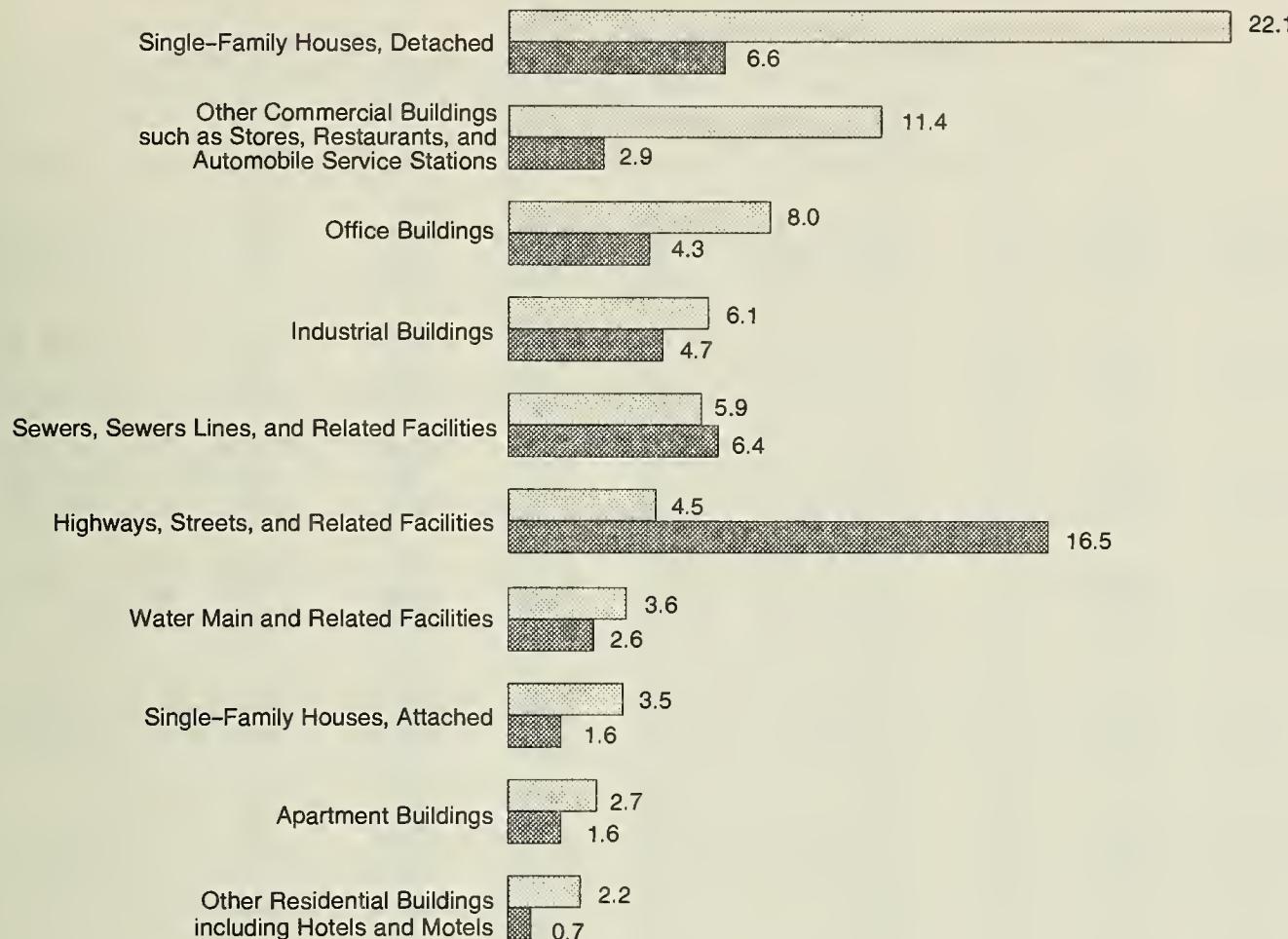


Figure 2. **Selected Costs Per Dollar Value of Business Done**

(Percent)

1987 
1982 

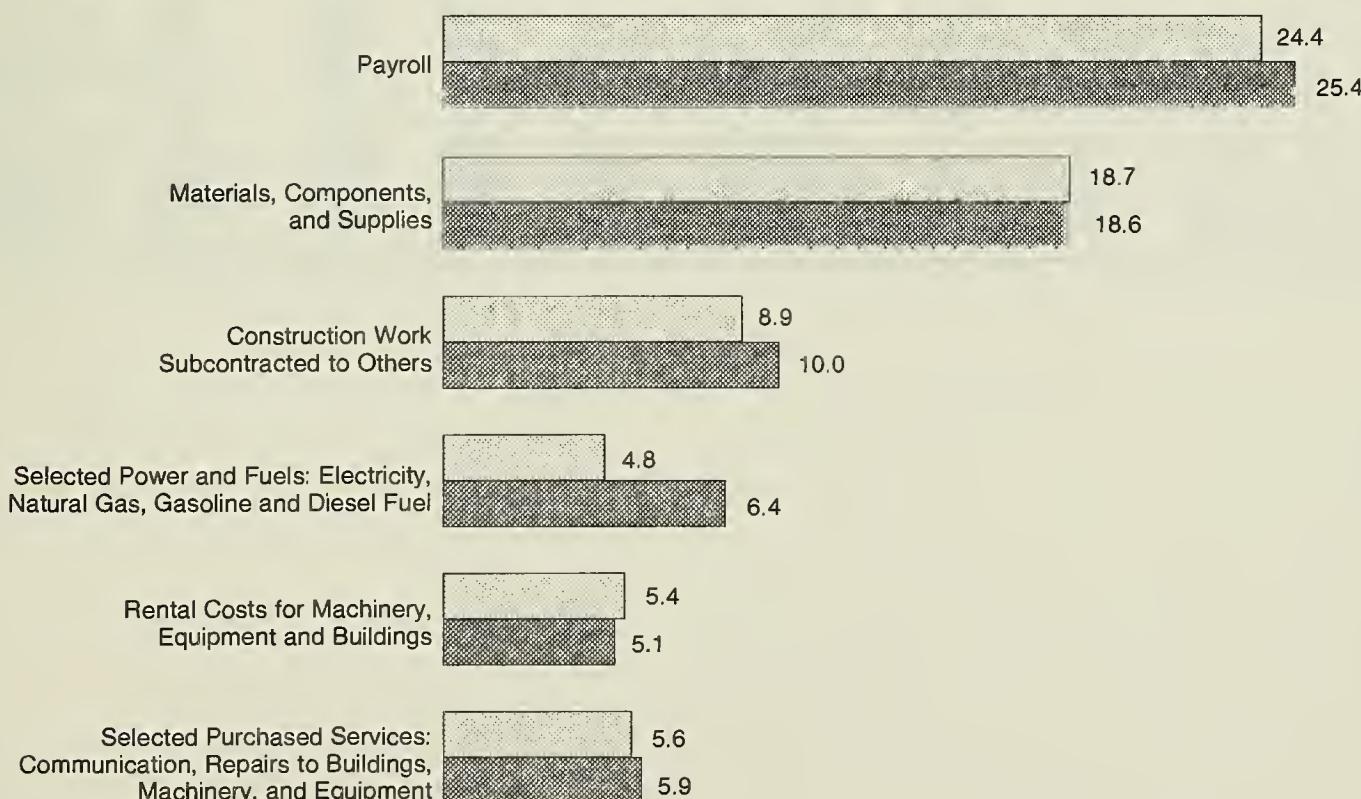


Table 1. General Statistics for Establishments With Payroll by State: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of establishment	1987								
	Number of establishments	Employees**		Payroll		Construction worker hours (thousands)	Value of construction work	Net value of construction work	
		All	Construction workers	All employees	Construction workers				
	A	B	C	D	E	F	G	H	
United States	13 422	95 329	79 198	2 059 792	1 597 517	137 093	8 244 398	7 490 988	
Alabama	123	1 004	788	17 545	12 456	1 418	65 947	(D)	
Alaska	96	(S)	(S)	(S)	(S)	(S)	(S)	(S)	
Arizona	138	708	581	13 277	9 816	883	65 335	59 360	
Arkansas	97	592	487	9 012	6 685	785	37 923	31 375	
California	890	9 607	8 137	264 343	201 766	14 147	1 204 038	1 074 612	
Colorado	294	1 580	1 241	30 278	23 413	2 009	95 200	87 392	
Connecticut	354	2 570	2 075	67 546	49 444	4 053	243 550	225 495	
Delaware	24	598	548	13 081	11 026	788	(D)	49 650	
District of Columbia	4	(D)	39	(D)	1 033	(D)	(D)	(D)	
Florida	540	5 316	4 382	96 885	75 216	8 026	390 622	354 550	
Georgia	256	1 868	1 632	35 747	27 361	2 416	128 976	116 290	
Hawaii	27	158	122	4 548	3 209	236	*29 426	*21 460	
Idaho	29	(S)	(S)	(S)	(S)	(D)	(D)	(S)	
Illinois	461	3 287	2 750	87 168	68 123	4 589	332 725	303 045	
Indiana	395	2 110	1 737	40 581	32 827	3 155	152 092	142 601	
Iowa	77	436	363	7 334	5 823	598	30 189	28 445	
Kansas	134	987	792	18 829	14 732	1 242	76 807	68 286	
Kentucky	222	1 163	980	19 356	15 800	1 492	76 900	72 836	
Louisiana	104	(S)	(S)	(S)	(S)	(S)	(S)	(S)	
Maine	200	1 273	1 063	22 133	17 587	2 177	95 173	88 361	
Maryland	254	3 097	2 663	74 660	59 044	4 902	264 825	236 271	
Massachusetts	581	4 236	3 339	109 312	76 984	5 558	423 366	386 561	
Michigan	606	3 391	2 777	77 818	56 761	4 682	312 220	289 339	
Minnesota	273	1 692	1 348	45 801	36 044	2 480	184 266	167 304	
Mississippi	59	572	479	9 616	8 004	841	36 696	32 331	
Missouri	353	2 186	1 830	43 967	33 394	3 012	156 413	145 563	
Montana	66	(S)	(S)	(S)	(S)	(S)	(S)	(S)	
Nebraska	69	329	272	4 878	4 116	440	19 309	18 330	
Nevada	81	683	545	17 907	13 815	931	85 734	67 167	
New Hampshire	298	1 565	1 260	32 117	23 307	2 056	143 366	133 575	
New Jersey	666	4 887	4 139	114 874	89 794	7 460	451 989	410 357	
New Mexico	40	225	186	3 309	2 314	326	10 979	10 797	
New York	880	7 028	5 897	155 218	125 979	10 534	600 041	555 228	
North Carolina	307	2 176	1 834	34 539	27 560	3 038	153 057	127 924	
North Dakota	63	306	245	3 399	2 903	352	12 492	11 969	
Ohio	753	4 660	3 887	93 317	73 807	6 577	361 722	331 808	
Oklahoma	104	585	480	9 394	7 027	796	27 394	26 425	
Oregon	174	672	550	14 459	11 276	960	61 790	58 817	
Pennsylvania	887	6 168	5 136	129 538	104 209	9 027	513 173	467 681	
Rhode Island	105	470	381	10 801	8 464	623	40 253	38 334	
South Carolina	112	930	774	15 601	12 592	1 511	64 769	59 407	
South Dakota	26	164	130	3 471	2 470	276	11 676	11 602	
Tennessee	195	1 586	1 352	26 070	20 870	2 280	113 899	101 797	
Texas	528	3 978	3 285	67 220	51 143	5 435	266 629	237 329	
Utah	92	545	443	11 379	9 243	735	55 406	50 081	
Vermont	168	870	732	16 420	13 007	1 288	67 003	64 217	
Virginia	427	3 545	3 052	67 752	53 775	5 289	276 291	253 191	
Washington	278	1 519	1 267	36 328	29 139	2 158	137 725	127 733	
West Virginia	133	431	363	7 403	5 887	572	32 213	29 936	
Wisconsin	313	2 004	1 632	45 435	36 969	3 003	172 266	155 784	
Wyoming	45	(S)	(S)	(S)	(S)	(S)	(S)	(S)	

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

1987—Con.

Value added††	Cost of materials, components, supplies, and fuels	Cost of construction work sub-contracted to others	Rental cost for machinery, equipment, and buildings	Capital expenditures, other than land	End-of-year gross book value of depreciable assets	1982			Relative standard error of estimate (percent) for column—			Location of establishment
						All employees**	Total construction receipts ¹	Value added††				
I	J	K	L	M	N	O	P	Q	B	H	M	
5 707 716	1 991 245	753 409	459 004	465 538	3 271 670	135 968	8 181 330	5 507 225	1	1	3	U.S.
46 775 (S)	(D) (S)	(D) (S)	2 203 (S)	1 355 (S)	*20 106 (S)	2 465 1 412	114 993 126 323	66 052 102 241	12 (S)	30 (S)	30 (S)	AL
50 980	9 119	5 975	2 940	2 904	31 189	1 782	133 517	91 200	14	18	30	AZ
23 579	7 848	6 548	1 926	*1 579	14 693	1 434	96 631	74 446	14	12	41	AR
852 454	256 657	129 425	125 467	36 612	229 859	9 121	746 039	498 603	3	2	10	CA
69 386	24 483	7 808	3 864	4 482	86 794	3 919	222 599	160 068	9	8	27	CO
170 988	61 500	18 054	15 129	21 167	115 566	2 118	137 722	90 202	9	8	18	CT
34 117	16 405	(D)	(D)	3 728	15 066	409	23 529	15 795	3	3	8	DE
3 443	(D)	(D)	(D)	(D)	(D)	(D)	6 154	3 510	(D)	(D)	(D)	DC
260 320	105 273	36 072	20 218	16 032	150 073	6 503	376 068	245 741	5	4	13	FL
88 334	29 422	12 685	4 802	4 102	56 746	2 026	119 516	77 475	8	8	21	GA
*19 336 (S)	2 437 (S)	(S)	*1 256 (D)	*1 398 (D)	*4 156 (S)	380 (S)	29 735 428	19 213 15 813	32 (S)	52 (S)	53 (S)	HI
235 522	73 552	29 680	13 619	23 322	161 330	4 931	354 890	254 740	5	4	13	IL
110 810	40 123	9 491	5 114	14 208	82 773	2 884	155 921	107 702	7	6	13	IN
21 169	7 556	1 743	1 107	*1 506	16 399	1 654	75 892	55 180	19	14	47	IA
53 004	15 504	8 520	4 139	1 267	26 342	1 897	108 273	68 500	10	8	12	KS
51 518	22 497	4 063	4 968	4 782	44 230	1 341	79 733	47 753	8	8	27	KY
(S)	(S)	(S)	(S)	(S)	(S)	4 108	258 773	177 099	(S)	(S)	(S)	LA
65 318	25 762	6 811	4 380	12 624	59 819	1 562	67 983	46 140	11	10	28	ME
199 868	46 138	28 554	18 518	18 196	99 237	3 048	154 823	110 628	3	4	9	MD
295 260	107 789	36 805	25 557	22 685	146 109	3 578	191 478	135 983	5	5	15	MA
210 336	84 281	22 880	13 002	17 834	141 803	3 751	222 826	147 433	5	4	12	MI
124 822	45 601	16 962	7 528	15 012	85 219	2 684	154 778	108 289	6	5	17	MN
22 947	9 766	4 364	1 882	2 262	15 565	1 270	70 697	54 622	18	15	13	MS
109 122 (S)	37 583 (S)	10 849 (S)	5 848 (S)	8 432 (S)	70 013 (S)	3 085 604	169 418	118 918	8	6	16	MO
14 629	3 730	979	*330	*1 020	11 766	1 408	73 737	36 475 24 534	(S)	(S)	(S)	MT
51 797	17 592	18 567	1 987	5 360	30 556	614	41 309	51 512	22	14	48	NE
102 587	34 012	9 790	4 512	9 626	59 674	1 028	46 815	31 630	11	14	26	NH
304 501	115 613	41 631	17 392	23 906	183 550	3 423	241 939	156 181	4	4	10	NJ
9 236	1 921	*181	397	*651	(D)	960	48 490	37 429	22	16	42	NM
426 135	147 176	44 812	33 836	42 300	244 139	6 052	363 877	238 297	4	4	14	NY
94 919	34 359	25 133	5 296	7 541	70 941	3 049	114 344	80 001	9	8	24	NC
8 591	3 986	*522	*257	*1 069	*14 504	895	52 211	34 977	25	22	45	ND
244 880	97 243	29 913	14 550	24 059	130 320	5 533	325 564	208 368	4	4	9	OH
21 975	5 008	968	719	636	9 000	2 611	159 054	114 928	17	15	26	OK
45 261	14 650	2 972	4 312	4 959	36 192	1 522	100 475	62 583	13	15	22	OR
352 227	128 485	45 491	20 458	34 651	220 435	7 098	397 208	255 094	3	3	10	PA
31 671	8 874	1 918	3 367	*5 561	19 122	647	33 132	23 237	11	12	48	RI
48 470	12 205	5 361	3 480	3 069	32 350	1 508	74 778	46 338	12	9	29	SC
8 611	3 202	*73	*360	*460	*6 895	(D)	27 651	15 981	25	24	49	SD
80 157	22 241	12 101	5 394	2 431	42 728	3 481	220 824	135 054	7	15	17	TN
169 881	76 738	29 300	10 857	11 280	96 732	14 302	886 417	585 961	7	6	15	TX
33 884	17 321	5 325	1 565	2 379	14 919	1 006	53 287	38 433	12	22	37	UT
47 338	18 032	2 785	1 984	6 924	38 778	723	34 807	26 101	12	12	38	VT
184 398	72 062	23 099	13 441	15 546	118 309	4 025	198 631	124 409	6	6	14	VA
95 382	34 865	9 991	11 689	8 978	54 702	2 291	142 084	89 554	7	7	20	WA
21 636	9 647	2 277	*1 567	*1 817	*13 633	1 017	55 062	42 548	16	16	58	WV
114 945 (S)	44 748 (S)	16 481 (S)	7 428 (S)	10 629 (D)	87 465 (S)	2 798 978	168 088 65 197	112 246 48 173	8 (S)	6 (S)	17 (D)	WI WY

Table 2. Detailed Statistics for Establishments With Payroll: 1987 and Earlier Census Years

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	1987	1982	1977	1972	Relative standard error of estimate (percent)			
					1987	1982	1977	1972
Number of establishments in business during year	13 422	19 646	16 521	15 981	1	1	2	2
Proprietors and working partners	3 329	7 412	10 009	10 692	4	2	3	3
All employees**	95 329	135 968	104 092	104 598	1	1	1	2
Construction workers:								
March	68 030	96 321	74 781	76 039	1	1	1	2
May	81 722	117 938	97 884	93 598	1	1	1	2
August	86 598	124 876	101 343	102 262	1	1	1	2
November	80 439	113 125	91 643	91 858	1	1	1	2
Average	79 198	115 059	91 522	92 592	1	1	1	2
Other employees:								
March	15 585	20 702	11 826	11 382	2	1	1	2
May	16 085	(NA)	(NA)	(NA)	2	(NA)	(NA)	(NA)
August	16 570	(NA)	(NA)	(NA)	2	(NA)	(NA)	(NA)
November	16 285	(NA)	(NA)	(NA)	2	(NA)	(NA)	(NA)
Average	16 130	(NA)	(NA)	(NA)	2	(NA)	(NA)	(NA)
Construction worker hours (thousands):								
January to March	27 294	37 614	(NA)	(NA)	1	1	(NA)	(NA)
April to June	35 571	47 984	(NA)	(NA)	1	1	(NA)	(NA)
July to September	39 126	52 793	(NA)	(NA)	1	1	(NA)	(NA)
October to December	35 100	45 503	(NA)	(NA)	1	1	(NA)	(NA)
Total hours worked	137 093	183 896	(NA)	(NA)	1	1	(NA)	(NA)
Payroll, all employees	2 059 792	2 151 859	1 207 669	923 468	1	1	1	2
Payroll, construction workers	1 597 517	1 756 734	1 020 923	786 583	1	1	1	2
Payroll, other employees	462 274	395 124	186 746	136 885	1	1	1	2
First quarter payroll, all employees	402 781	423 383	220 121	(NA)	1	1	1	(NA)
Employer costs for fringe benefits, all employees	447 879	406 281	246 361	(NA)	1	1	2	(NA)
Legally required expenditures	310 069	305 218	144 243	(NA)	1	1	2	(NA)
Voluntary expenditures	137 810	101 063	102 118	(NA)	2	1	3	(NA)
Dollar value of business done	8 452 371	8 472 648	4 370 233	3 054 467	1	1	1	2
Value of construction work ¹	8 244 398	8 181 330	4 215 722	2 956 531	1	1	1	2
Value of construction work subcontracted in from others	4 281 940	3 105 846	2 194 749	1 401 078	2	1	1	2
Land receipts ²	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Other business receipts	207 972	291 318	154 511	97 936	4	2	3	4
Net value of construction work ¹	7 490 988	7 336 965	3 929 674	2 722 914	1	1	1	2
Value added††	5 707 716	5 507 225	2 993 648	2 188 249	1	1	1	2
Selected costs								
Materials, components, and supplies ³	2 744 654	2 965 423	1 376 585	866 218	1	1	1	2
Construction work subcontracted to others	1 582 800	1 575 371	883 844	632 601	1	1	1	2
Selected power, fuels, and lubricants	753 409	844 364	286 048	233 617	3	1	1	2
Electricity	408 444	545 686	206 693	(NA)	1	1	1	(NA)
Natural gas	23 079	25 546	8 028	(NA)	2	2	2	(NA)
Gasoline and diesel fuel	3 696	9 164	3 132	(NA)	3	2	2	(NA)
On highway use	348 871	470 497	172 041	(NA)	1	1	1	(NA)
Off highway use	160 059	(NA)	(NA)	(NA)	2	(NA)	(NA)	(NA)
Other, including lubricating oils and greases	188 812	(NA)	(NA)	(NA)	1	(NA)	(NA)	(NA)
	32 796	40 478	23 493	(NA)	2	2	3	(NA)
Rental cost for machinery, equipment, and buildings	459 004	428 287	220 273	(NA)	2	1	1	(NA)
For machinery and equipment	419 503	394 417	208 908	173 188	2	1	1	3
For buildings	39 500	33 870	11 365	(NA)	4	3	2	(NA)
Selected purchased services	471 487	503 629	293 708	(NA)	2	1	1	(NA)
Communication services	42 182	40 539	18 789	(NA)	2	1	2	(NA)
Repairs to buildings and other structures	12 907	10 240	4 993	(NA)	5	4	4	(NA)
Repairs to machinery and equipment	416 397	452 850	269 926	(NA)	2	1	1	(NA)
Ownership of construction projects:								
Value of construction work ¹	8 244 398	8 181 330	4 215 722	2 956 531	1	1	1	2
Government owned	1 178 905	2 100 654	761 080	735 496	3	2	1	2
Federal	248 603	(NA)	(NA)	(NA)	6	(NA)	(NA)	(NA)
State and local	930 302	(NA)	(NA)	(NA)	3	(NA)	(NA)	(NA)
Privately owned	7 065 492	6 080 675	3 454 642	2 221 035	2	1	1	2

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

²Data were collected separately for establishments classified in SIC 1531, Operative Builders, and SIC 6552, Subdividers and Developers, Except Cemeteries. For all other industries, data are included in other business receipts.

³For 1972, includes data for power, fuels, and lubricants.

Table 3. **Assets, Capital Expenditures, and Depreciation for Establishments With Payroll: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	1987	1982	Relative standard error of estimate (percent)	
			1987	1982
BUILDINGS AND OTHER STRUCTURES, MACHINERY, AND EQUIPMENT				
Beginning-of-year gross book value of depreciable assets	2 962 122	5 033 453	2	1
Capital expenditures, other than land	465 538	404 712	3	1
New	352 828	246 655	3	2
Used	112 709	158 056	5	2
Retirements and disposition of depreciable assets	155 989	234 937	8	4
End-of-year gross book value of depreciable assets	3 271 670	5 203 228	2	1
Depreciation charges during year	436 178	640 689	3	1
Buildings and other Structures, Additions, and Related Facilities				
Beginning-of-year gross book value of depreciable assets	254 391	365 660	6	3
Capital expenditures, other than land	30 554	23 394	13	4
New buildings and other structures	22 743	17 526	16	5
Used buildings and other structures	7 810	5 867	13	9
Retirements and disposition of depreciable assets	2 754	8 789	20	10
End-of-year gross book value of depreciable assets	282 191	380 265	6	3
Depreciation charges during year	25 589	30 528	12	3
Machinery and Equipment				
Beginning-of-year gross book value of depreciable assets	2 707 730	4 667 793	2	1
Capital expenditures, other than land	434 983	381 318	3	1
New machinery and equipment, including automobiles and trucks	330 084	229 129	3	1
New automobiles and trucks, intended primarily for highway use	103 090	54 418	5	3
Used machinery and equipment, including automobiles and trucks	104 899	152 189	5	2
Retirements and disposition of depreciable assets	153 234	226 148	8	4
End-of-year gross book value of depreciable assets	2 989 479	4 822 963	2	1
Depreciation charges during year	410 589	610 160	3	1

Table 4. Value of Inventories for Establishments With Payroll: 1987 and 1986

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Establishments with payroll	Relative standard error of estimate (percent)
All establishments:		
Number	13 422	1
Value of construction work	8 244 398	1
Establishments with inventories:		
Number	2 454	5
Value of construction work	2 279 830	3
Inventories ¹ :		
End of 1987, materials and supplies	41 811	5
End of 1986, materials and supplies	37 460	5
Establishments with no inventories:		
Number	8 259	3
Value of construction work	4 218 708	2
Establishments not reporting:		
Number	2 709	5
Value of construction work	1 745 860	2

¹Inventories at cost or market prior to any adjustment to correct to LIFO values.

Table 5. Selected Statistics for Establishments With Payroll by Employment Size Class: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics	Total	Establishments with an average of—								
		1 to 4 employees	5 to 9 employees	10 to 19 employees	20 to 49 employees	50 to 99 employees	100 to 249 employees	250 to 499 employees	500 to 999 employees	1,000 employees or more
1987										
Number of establishments	13 422	(S)	2 837	1 281	712	174	59	8	—	—
All employees**	95 329	(S)	18 208	16 703	20 626	11 822	8 548	2 756	—	—
Payroll, all employees	2 059 792	(S)	330 753	350 085	495 784	311 783	232 517	72 792	—	—
Construction worker hours (thousands)	137 093	(S)	23 999	23 074	30 877	18 449	12 791	4 509	—	—
Dollar value of business done	8 452 371	(S)	1 351 988	1 368 669	1 904 302	1 275 792	927 866	292 593	—	—
Value of construction work ¹	8 244 398	(S)	1 316 114	1 329 732	1 853 695	1 243 071	1 199 982	(D)	—	—
Net value of construction work ¹	7 490 988	(S)	1 209 604	1 222 627	1 666 907	1 104 051	1 074 282	(D)	—	—
Value added††	5 707 716	(S)	929 258	957 452	1 314 804	852 724	555 962	206 472	—	—
Cost of materials, components, supplies, and fuels	1 991 245	(S)	316 221	304 111	402 710	284 048	266 359	65 966	—	—
Cost of construction work subcontracted to others	753 409	(S)	106 509	107 104	186 788	139 020	105 545	20 155	—	—
Rental cost for machinery, equipment, and buildings	459 004	(S)	62 162	72 377	106 134	92 569	65 400	11 895	—	—
Capital expenditures, other than land	465 538	(S)	90 730	95 153	105 148	54 288	35 195	(D)	—	—
End-of-year gross book value of depreciable assets	3 271 670	(S)	673 659	560 089	694 872	322 310	239 917	(D)	—	—
1982										
All employees**	135 968	25 392	24 526	24 197	29 240	16 076	11 758	1 973	2 805	(D)
Total construction receipts ¹	8 181 330	1 238 622	1 199 859	1 374 969	1 856 210	1 275 783	892 166	154 730	188 989	(D)
Value added††	5 507 225	863 022	840 155	936 022	1 248 724	841 673	588 359	74 696	114 572	(D)
1987 RELATIVE STANDARD ERROR OF ESTIMATE (PERCENT)										
All employees**	1	(S)	4	4	2	(W)	(W)	(W)	—	—
Net value of construction work ¹	1	(S)	4	4	2	(W)	(W)	(D)	—	—
Capital expenditures, other than land	3	(S)	9	9	4	3	(W)	(D)	—	—

Note: Underscored data fields include data from adjoining columns which have been withheld to avoid disclosing data for individual companies.

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 6. Selected Statistics by Size Class of the Dollar Value of Business Done for Establishments With Payroll: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics	Total	Establishments with dollar value of business done									
		Less than \$25,000	\$25,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$249,999	\$250,000 to \$499,999	\$500,000 to \$999,999	\$1,000,000 to \$2,499,999	\$2,500,000 to \$4,999,999	\$5,000,000 to \$9,999,999	\$10,000,000 or more
1987											
Number of establishments -----	13 422	(S)	(S)	(S)	4 170	2 595	1 556	1 041	347	153	94
All employees** -----	95 329	(S)	(S)	(S)	11 972	13 126	13 990	18 568	11 134	9 791	12 095
Payroll, all employees -----	2 059 792	(S)	(S)	(S)	166 480	227 025	276 788	421 701	292 628	250 065	377 628
Construction worker hours (thousands) -----	137 093	(S)	(S)	(S)	14 719	17 180	20 897	27 872	16 287	15 301	18 969
Dollar value of business done -----	8 452 371	(S)	(S)	(S)	688 203	921 808	1 058 679	1 644 122	1 182 347	1 039 229	1 731 004
Value of construction work ¹ -----	8 244 398	(S)	(S)	(S)	673 802	896 554	1 034 268	1 596 316	1 147 607	1 017 889	1 694 553
Net value of construction work ¹ -----	7 490 988	(S)	(S)	(S)	644 469	847 133	955 783	1 464 037	992 523	903 179	1 506 372
Value added ¹¹ -----	5 707 716	(S)	(S)	(S)	470 552	621 144	728 562	1 158 991	792 709	691 107	1 113 466
Cost of materials, components, supplies, and fuels -----	1 991 245	(S)	(S)	(S)	188 318	251 243	251 632	352 851	234 554	233 411	429 357
Cost of construction work subcontracted to others -----	753 409	(S)	(S)	(S)	(S)	49 421	78 485	132 278	155 084	114 709	188 181
Rental cost for machinery, equipment, and buildings -----	459 004	(S)	(S)	(S)	(S)	29 164	70 766	75 722	61 605	79 152	115 516
Capital expenditures, other than land -----	465 538	(S)	(S)	(S)	(S)	58 524	86 449	113 918	57 288	42 344	51 991
End-of-year gross book value of depreciable assets -----	3 271 670	(S)	(S)	(S)	(S)	576 824	553 046	702 810	379 350	246 679	318 289
1982											
All employees** -----	135 968	2 934	3 554	7 907	21 880	17 268	19 687	24 090	13 954	12 000	12 692
Total construction receipts ¹ -----	8 181 330	28 593	77 239	260 576	886 043	870 804	1 067 300	1 558 159	1 114 634	1 024 452	1 293 528
Value added ¹¹ -----	5 507 225	18 060	53 410	181 515	620 017	609 738	746 121	1 040 820	742 444	674 740	820 356
1987 RELATIVE STANDARD ERROR OF ESTIMATE (PERCENT)											
All employees** -----	1	(S)	(S)	(S)	4	4	4	4	3	2	(W)
Net value of construction work ¹ -----	1	(S)	(S)	(S)	4	4	4	4	3	3	(W)
Capital expenditures, other than land -----	3	(S)	(S)	(S)	(S)	10	10	8	5	4	(W)

Note: Underscored data fields include data from adjoining columns which have been withheld to avoid disclosing data for individual companies.

¹In earlier censuses construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 7. Value of Construction Work for Establishments With Payroll by Type of Construction: 1987 and 1982

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Type of construction	Value of construction work ¹				Relative standard error of estimate (percent) for column—			
	Total	New construction	Additions, alterations, or reconstruction ²	Maintenance and repair				
	A	B	C	D	A	B	C	D
1987								
Value of construction work ¹	8 244 398	6 536 523	709 960	398 821	1	1	2	2
Building construction								
Single-family houses	5 954 873	5 223 929	503 046	227 897	1	1	3	5
Single-family houses, detached	2 112 521	1 895 136	132 203	85 181	2	2	6	7
Single-family houses, attached	1 820 979	1 621 328	121 202	78 447	2	2	7	8
Apartment buildings with two or more apartments	291 542	273 807	11 001	6 733	7	7	12	17
Other residential buildings, including hotels and motels	224 115	208 747	7 734	7 633	3	3	16	20
Hotels and motels	178 650	149 379	19 248	10 022	9	9	21	18
Other residential buildings, excluding hotels and motels	69 517	59 674	6 454	3 389	5	4	19	9
Office buildings	109 132	89 704	12 794	6 633	15	14	26	26
Other commercial buildings such as stores, restaurants, and automobile service stations	658 168	602 651	45 237	10 280	3	3	9	8
Industrial buildings and warehouses								
Industrial buildings	937 282	811 106	82 990	43 185	2	2	5	5
Warehouses	611 783	518 598	66 268	26 915	2	2	4	12
Religious buildings	504 348	423 027	56 402	24 918	3	3	4	12
Educational buildings	107 434	95 571	9 866	*1 997	4	4	13	50
Hospitals and institutional buildings	36 140	28 445	6 901	793	5	6	7	22
Farm buildings	102 643	71 899	27 908	2 835	6	7	10	25
Amusement, social, and recreational buildings	105 142	67 854	34 846	2 441	5	6	9	17
Other nonresidential buildings	43 842	28 058	11 385	4 397	13	16	24	16
Land development for buildings	13 280	10 242	1 862	1 175	19	24	25	14
Recreational facilities such as athletic fields, golf courses, and outdoor tennis courts	70 989	54 483	6 854	*9 664	10	7	12	57
Bridges, tunnels, and elevated highways	860 318	777 331	59 610	23 376	4	4	5	7
Dam and reservoir construction								
Marine construction	1 690 432	1 312 593	206 914	170 924	2	2	4	5
Harbor and port facilities	373 673	291 557	55 158	26 957	2	3	7	5
Parking areas including private driveways	13 126	11 364	273	1 488	31	32	(W)	30
Recreational facilities such as athletic fields, golf courses, and outdoor tennis courts	19 428	16 480	1 462	1 485	18	21	27	24
Bridges, tunnels, and elevated highways	17 419	15 126	1 843	448	14	15	11	15
Dam and reservoir construction	18 541	12 748	5 766	(S)	5	8	(W)	(S)
Marine construction	7 173	3 905	1 225	2 043	8	8	7	11
Harbor and port facilities	2 086	(D)	(D)	(D)	5	(D)	(D)	(D)
Conservation and development construction	1 443	(D)	(D)	(D)	20	(D)	(D)	(D)
Power and communication transmission lines, towers, and related facilities	33 885	17 222	(D)	(D)	6	12	(D)	(D)
Sewers, water mains, and related facilities	15 634	14 721	(D)	(D)	10	9	(D)	(D)
Sewers, sewer lines, and related facilities	779 963	612 367	82 232	85 363	3	3	8	8
Water mains and related facilities	486 374	373 160	57 358	55 854	3	3	9	7
Pipeline, other than sewer or water lines	293 588	239 206	24 873	29 508	5	5	10	11
Mass transit construction	4 806	*2 179	(D)	(D)	21	45	(D)	(D)
Heavy industrial facilities	4 291	3 813	(D)	(D)	3	4	(D)	(D)
Blast furnaces, petroleum refineries, and chemical complexes	50 313	31 354	7 328	11 629	8	10	25	13
Power plants	22 310	12 287	2 717	7 305	15	22	9	19
Power plants, nuclear	28 002	19 067	4 611	4 323	9	8	40	6
Power plants, except nuclear	5 475	4 172	1 219	*83	14	15	9	49
Sewage treatment and water treatment plants	22 527	14 895	*3 391	4 240	10	10	54	7
Sewage treatment plants	91 322	70 666	15 688	4 966	6	6	7	21
Water treatment plants	77 221	60 862	12 189	4 169	7	7	8	20
Oilfields	14 100	9 804	3 498	797	11	14	19	35
Earthmoving, nonbuilding	11 275	8 857	1 402	1 014	19	20	19	23
Other nonbuilding construction	116 053	97 776	11 487	6 790	11	11	19	16
Construction work, n.s.k.	130 001	99 627	11 224	19 168	6	(NA)	(NA)	(NA)
Construction work, n.s.k.	599 093	(NA)	(NA)	(NA)	3	(NA)	(NA)	(NA)
1982								
Value of construction work ¹	8 181 330	6 771 812	(NA)	1 409 517	1	1	(NA)	1
Building construction								
Single-family houses	2 139 814	1 864 437	(NA)	275 376	1	1	(NA)	2
Single-family houses, detached	671 406	575 237	(NA)	96 168	2	2	(NA)	5
Single-family houses, attached	538 921	459 257	(NA)	79 664	3	3	(NA)	6
Apartment buildings with two or more apartments	132 484	115 980	(NA)	16 504	4	5	(NA)	5
Other residential buildings, including hotels and motels	129 406	120 270	(NA)	9 135	2	3	(NA)	8
Hotels and motels	58 537	55 006	(NA)	3 531	3	3	(NA)	13
Other residential buildings, excluding hotels and motels	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Office buildings	351 412	325 808	(NA)	25 603	2	1	(NA)	9
Other commercial buildings such as stores, restaurants, and automobile service stations	234 182	179 518	(NA)	54 663	4	5	(NA)	4
Industrial buildings and warehouses	457 927	404 554	(NA)	53 373	2	2	(NA)	5
Industrial buildings	381 931	333 014	(NA)	48 917	2	2	(NA)	6
Warehouses	75 996	71 540	(NA)	4 456	4	4	(NA)	10
Religious buildings	16 239	13 587	(NA)	2 651	6	5	(NA)	24
Educational buildings	60 531	50 599	(NA)	9 932	4	4	(NA)	6
Hospitals and institutional buildings	83 035	76 291	(NA)	6 743	2	3	(NA)	7
Farm buildings	20 566	16 012	(NA)	4 554	10	11	(NA)	16
Amusement, social, and recreational buildings	27 503	25 773	(NA)	1 729	16	17	(NA)	32
Other nonresidential buildings	29 065	21 776	(NA)	7 288	7	8	(NA)	14
Nonbuilding construction								
Highways, streets, and related facilities	3 858 496	3 013 137	(NA)	845 359	1	1	(NA)	1
Outdoor swimming pools	1 347 594	1 023 842	(NA)	323 751	1	1	(NA)	2
Parking areas including private driveways	7 773	7 581	(NA)	192	18	19	(NA)	37
Recreational facilities such as athletic fields, golf courses, and outdoor tennis courts	19 161	15 036	(NA)	4 124	13	13	(NA)	13
Bridges, tunnels, and elevated highways	1 559	1 342	(NA)	217	29	24	(NA)	21
Tunnels	111 280	85 560	(NA)	25 720	4	4	(NA)	10
Bridges and elevated highways	35 565	34 075	(NA)	*1 489	3	2	(NA)	60
Dam and reservoir construction	75 715	51 484	(NA)	24 230	4	6	(NA)	9
Marine construction	150 376	129 004	(NA)	21 372	2	2	(NA)	4
Harbor and port facilities	135 885	105 671	(NA)	30 214	2	1	(NA)	7
Conservation and development construction	23 718	20 472	(NA)	3 245	13	14	(NA)	9
Power and communication transmission lines, towers, and related facilities	341 065	264 388	(NA)	76 677	3	4	(NA)	6
Sewers, water mains, and related facilities	130 596	107 362	(NA)	23 233	3	4	(NA)	6
Sewers, sewer lines, and related facilities	738 745	612 736	(NA)	126 009	1	2	(NA)	4
	525 731	435 667	(NA)	90 064	2	2	(NA)	5

See footnotes at end of table.

Table 7. Value of Construction Work for Establishments With Payroll by Type of Construction: 1987 and 1982—Con.

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Type of construction	Value of construction work ¹				Relative standard error of estimate (percent) for column—			
	Total	New construction	Additions, alterations, or reconstruction ²	Maintenance and repair				
	A	B	C	D	A	B	C	D
1982—Con.								
Nonbuilding construction—Con.								
Sewers, water mains, and related facilities—Con.								
Water mains and related facilities	213 014	177 068	(NA)	35 945	3	3	(NA)	5
100 585	67 735	(NA)	32 850	3	3	(NA)	4	
40 951	31 434	(NA)	9 516	6	1	(NA)	23	
175 950	141 926	(NA)	34 023	1	1	(NA)	3	
51 491	33 459	(NA)	18 031	3	3	(NA)	2	
124 459	108 467	(NA)	15 992	2	2	(NA)	6	
Power plants	14 190	10 254	(NA)	3 935	5	3	(NA)	14
Power plants, nuclear	110 268	98 212	(NA)	12 056	2	1	(NA)	8
Power plants, except nuclear	85 079	75 674	(NA)	9 404	3	3	(NA)	8
Sewage treatment and water treatment plants	67 045	58 185	(NA)	8 860	4	5	(NA)	8
Sewage treatment plants	18 033	17 489	(NA)	544	3	3	(NA)	5
Water treatment plants	165 481	122 124	(NA)	43 357	4	4	(NA)	5
Oilfields	262 023	181 577	(NA)	80 444	4	3	(NA)	9
Other nonbuilding construction								
Construction work, n.s.k.	2 183 019	1 894 237	(NA)	288 781	1	1	(NA)	2

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

²In 1982, data for additions, alterations, or reconstruction were not collected separately. These data are included with "New construction."

Table 8. Selected Statistics for Establishments With Payroll by Specialization in Types of Construction: 1987

[Thousand dollars. Detail may not add to total due to rounding. This table presents selected statistics for establishments according to degree of specialization in major types of construction work. If number of establishments or value of construction work for a given type of specialization are relatively insignificant, data may not be shown. In addition, data are not shown in this table where distribution of the value of construction work by type of construction was not provided in table 7. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Number of establishments	All employees**	Payroll, all employees	Value of construction work		Net value of construction work†	Value added††	Cost of construction work subcontracted to others	Relative standard error of estimate (percent) for column—			
				For all types	For specialized type				B	D	H	
				A	C	D	E	F	G	H		
All establishments	13 422	95 329	2 059 792	8 244 398	4 619 267	7 490 988	5 707 716	753 409	1	1	3	
Establishments not specializing by type	3 073	31 931	762 514	2 893 581	(NA)	2 611 147	1 992 436	282 433	1	1	4	
Establishments specializing 51 percent or more	10 348	63 397	1 297 278	5 350 817	4 619 267	4 879 841	3 715 279	470 976	2	2	2	
SINGLE-FAMILY HOUSES, DETACHED												
All establishments specializing in type	3 824	18 984	370 826	1 580 252	1 351 168	1 450 635	1 107 464	129 617	3	3	10	
Establishments with —												
100 percent specialization	1 814	7 339	147 388	596 542	596 542	537 560	397 744	58 982	5	5	21	
90 to 99 percent specialization	586	2 976	59 873	269 493	251 620	257 239	206 947	12 253	8	8	14	
80 to 89 percent specialization	281	2 462	47 530	174 353	141 113	166 281	130 852	8 072	7	6		
70 to 79 percent specialization	597	2 647	49 749	236 490	173 718	218 778	164 016	17 712	8	7	4	
60 to 69 percent specialization	409	3 031	55 156	257 110	162 967	232 386	178 120	24 724	7	6	14	
51 to 59 percent specialization	135	526	11 127	46 262	25 205	38 389	29 784	7 872	21	14	12	
SINGLE-FAMILY HOUSES, ATTACHED												
All establishments specializing in type	246	1 743	38 317	169 804	130 056	153 690	121 141	16 113	12	13	16	
Establishments with —												
100 percent specialization	106	417	8 581	52 556	52 556	47 565	42 518	4 990	20	28	29	
90 to 99 percent specialization	*11	*76	1 552	*3 983	3 816	3 632	2 844	(S)	54	41	(S)	
80 to 89 percent specialization	25	95	1 942	9 257	7 665	9 160	7 812	(S)	34	35	(S)	
70 to 79 percent specialization	46	294	6 055	26 441	18 718	22 951	18 475	3 490	32	25	24	
60 to 69 percent specialization	48	599	13 082	49 747	32 140	45 488	34 046	*4 259	24	28	45	
51 to 59 percent specialization	9	260	7 102	27 818	15 159	24 893	15 444	2 924	15	9	5	
APARTMENT BUILDINGS WITH TWO OR MORE APARTMENTS												
All establishments specializing in type	118	1 049	35 449	112 712	96 941	97 000	71 666	, 15 711	8	6	10	
Establishments with —												
100 percent specialization	27	303	7 927	39 925	39 925	34 165	23 925	5 760	8	11	20	
90 to 99 percent specialization	2	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	
80 to 89 percent specialization	*11	*111	2 078	7 760	6 208	5 509	3 743	*2 250	45	36	51	
70 to 79 percent specialization	57	114	2 801	11 886	8 672	(D)	7 235	(D)	16	11	(D)	
60 to 69 percent specialization	*10	267	4 744	19 172	11 936	15 295	12 624	3 877	21	15	6	
51 to 59 percent specialization	10	(D)	(D)	(D)	(S)	*1 130	(D)	*70	(D)	(D)	75	
OTHER RESIDENTIAL BUILDINGS, EXCLUDING HOTELS AND MOTELS												
All establishments specializing in type	86	706	14 980	57 505	47 746	53 927	41 676	3 577	17	27	24	
Establishments with —												
100 percent specialization	*27	245	4 666	*22 116	22 116	20 687	19 768	1 429	38	64	16	
90 to 99 percent specialization	*3	*49	*1 075	*6 330	*6 014	*5 384	*3 860	*946	59	59	59	
80 to 89 percent specialization	*7	*71	*1 518	*5 869	*5 111	*5 519	*2 766	*350	60	70	44	
70 to 79 percent specialization	*16	69	1 234	6 021	4 214	(D)	4 109	(D)	32	29	(D)	
60 to 69 percent specialization	*12	227	5 124	14 057	8 579	(D)	8 945	(S)	21	17	(S)	
51 to 59 percent specialization	*19	*43	*1 363	*3 110	*1 710	*3 110	*2 227	-	56	56	-	
OFFICE BUILDINGS												
All establishments specializing in type	183	3 365	97 809	398 745	317 645	361 955	291 334	36 790	3	4	4	
Establishments with —												
100 percent specialization	51	874	27 791	119 700	119 700	109 939	93 875	9 761	8	12	12	
90 to 99 percent specialization	22	340	10 432	36 632	33 801	29 107	25 886	7 525	7	8	4	
80 to 89 percent specialization	26	348	8 324	53 522	44 246	49 506	35 634	4 016	12	14	18	
70 to 79 percent specialization	48	599	13 701	66 428	49 002	63 379	49 690	3 049	12	8	23	
60 to 69 percent specialization	24	446	14 796	42 417	25 786	38 094	27 483	4 323	9	5	(W)	
51 to 59 percent specialization	11	756	22 763	80 045	45 109	71 930	58 764	8 115	(W)	(W)	(W)	
OTHER COMMERCIAL BUILDINGS SUCH AS STORES, RESTAURANTS, AND AUTOMOBILE SERVICE STATIONS												
All establishments specializing in type	511	6 730	148 334	580 782	486 249	525 616	387 676	55 166	4	4	14	
Establishments with —												
100 percent specialization	139	2 851	64 710	251 017	251 017	222 357	154 892	28 660	6	4	25	
90 to 99 percent specialization	54	589	13 208	48 171	44 328	44 043	32 288	*4 128	15	12	54	
80 to 89 percent specialization	84	848	19 935	75 195	60 239	68 410	54 989	6 784	14	12	2	
70 to 79 percent specialization	112	854	16 934	64 291	47 029	59 312	43 187	4 979	16	15	15	
60 to 69 percent specialization	87	1 002	20 992	87 016	53 077	79 652	62 087	7 363	11	10	6	
51 to 59 percent specialization	33	585	12 554	55 089	30 556	51 839	40 232	3 250	17	17	23	
INDUSTRIAL BUILDINGS												
All establishments specializing in type	292	3 116	74 122	246 862	201 368	232 868	186 884	13 993	6	6	13	
Establishments with —												
100 percent specialization	116	1 099	27 986	92 245	92 245	86 788	73 158	5 457	9	9	26	
90 to 99 percent specialization	*23	251	6 503	21 557	20 264	21 224	15 559	*333	23	22	64	
80 to 89 percent specialization	*32	*88	*2 200	*7 336	*5 868	*6 296	*4 800	(S)	49	63	(S)	
70 to 79 percent specialization	59	872	17 588	59 028	42 753	55 836	44 125	3 192	12	12	4	
60 to 69 percent specialization	47	512	13 940	46 392	29 348	43 893	33 301	2 499	13	9	13	
51 to 59 percent specialization	14	293	5 902	20 302	10 888	18 830	15 939	1 472	15	8	8	

Table 8. Selected Statistics for Establishments With Payroll by Specialization in Types of Construction: 1987—Con.

[Thousand dollars. Detail may not add to total due to rounding. This table presents selected statistics for establishments according to degree of specialization in major types of construction work. If number of establishments or value of construction work for a given type of specialization are relatively insignificant, data may not be shown. In addition, data are not shown in this table where distribution of the value of construction work by type of construction was not provided in table 7. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Item	Number of establishments	All employees**	Payroll, all employees	Value of construction work		Net value of construction work†	Value added††	Cost of construction work subcontracted to others	Relative standard error of estimate (percent) for column—			
				For all types	For specialized type				B	D	H	
	A	B	C	D	E	F	G	H	B	D	H	
LAND DEVELOPMENT FOR BUILDINGS												
All establishments specializing in type	749	8 659	187 006	854 350	775 454	759 654	607 222	94 696	4	4	11	
Establishments with —												
100 percent specialization	545	5 865	123 215	552 214	552 214	509 474	401 869	42 740	5	5	7	
90 to 99 percent specialization	27	439	11 002	67 245	61 228	61 533	55 762	5 711	12	6	5	
80 to 89 percent specialization	65	842	17 708	80 192	65 818	70 236	54 293	9 956	7	5	4	
70 to 79 percent specialization	*20	419	8 922	*36 750	26 583	28 283	23 253	*8 466	36	45	73	
60 to 69 percent specialization	75	727	13 909	72 588	45 675	53 496	39 759	19 092	17	18	40	
51 to 59 percent specialization	15	365	12 247	45 359	23 933	36 630	32 283	8 729	13	10	5	
SEWERS, SEWER LINES, AND RELATED FACILITIES												
All establishments specializing in type	395	2 307	43 082	197 481	161 244	183 317	118 546	14 164	9	7	5	
Establishments with —												
100 percent specialization	219	976	16 626	69 981	69 981	65 545	43 636	4 436	16	15	14	
90 to 99 percent specialization	*12	*86	1 762	*6 613	*5 952	(D)	*4 979	(D)	45	46	(D)	
80 to 89 percent specialization	*21	133	4 075	21 085	17 544	(D)	14 297	(D)	29	11	(D)	
70 to 79 percent specialization	78	691	12 132	62 877	45 995	57 791	34 648	5 086	12	10	4	
60 to 69 percent specialization	47	249	4 207	23 238	14 245	21 477	11 449	1 761	18	17	10	
51 to 59 percent specialization	*16	170	4 279	13 684	7 524	13 178	9 536	505	29	26	20	
WATER MAINS AND RELATED FACILITIES												
All establishments specializing in type	144	1 015	20 982	94 737	75 203	85 656	52 180	9 080	15	14	26	
Establishments with —												
100 percent specialization	55	345	7 683	30 129	30 129	26 582	13 681	*3 546	25	29	63	
90 to 99 percent specialization	38	76	2 273	14 726	13 989	14 342	8 338	384	39	39	39	
80 to 89 percent specialization	*8	*72	*1 267	*4 874	*3 899	*4 712	*2 724	*162	58	58	58	
70 to 79 percent specialization	*9	78	1 612	6 281	4 653	5 814	4 024	*466	22	25	50	
60 to 69 percent specialization	25	*236	3 740	19 076	11 724	*17 380	10 354	*1 695	45	39	46	
51 to 59 percent specialization	7	205	4 405	19 650	10 807	16 824	13 057	2 826	21	15	8	

Table 9. Quarterly Construction Worker Hours and Employment for Establishments With

[Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of establishment	Number of establishments	Average number of construction workers	Construction worker hours (thousands)	January to March		April to June	
				Construction workers ¹	Hours worked (thousands)	Construction workers ¹	Hours worked (thousands)
	A	B	C	D	E	F	G
United States -----	13 422	79 198	137 093	68 030	27 294	81 722	35 571
Alabama -----	123	788	1 418	736	305	827	374
Alaska -----	96	(S)	(S)	(S)	(S)	(S)	(S)
Arizona -----	138	581	883	597	208	658	260
Arkansas -----	97	487	785	399	142	490	207
California -----	890	8 137	14 147	7 368	2 981	8 284	3 685
Colorado -----	294	1 241	2 009	1 123	413	1 269	529
Connecticut -----	354	2 075	4 053	1 659	748	2 146	1 077
Delaware -----	24	548	788	397	150	557	213
District of Columbia -----	4	39	(D)	31	(D)	39	19
Florida -----	540	4 382	8 026	4 151	1 805	4 460	2 090
Georgia -----	256	1 632	2 416	1 541	538	1 650	629
Hawaii -----	27	122	236	90	*49	117	50
Idaho -----	29	(S)	(D)	(S)	(D)	(S)	(S)
Illinois -----	461	2 750	4 589	2 122	805	2 919	1 209
Indiana -----	395	1 737	3 155	1 473	605	1 763	842
Iowa -----	77	363	598	275	81	399	164
Kansas -----	134	792	1 242	694	244	809	318
Kentucky -----	222	980	1 492	877	334	1 030	388
Louisiana -----	104	(S)	(S)	(S)	(S)	(S)	(S)
Maine -----	200	1 063	2 177	796	381	1 150	600
Maryland -----	254	2 663	4 902	2 315	1 012	2 732	1 227
Massachusetts -----	581	3 339	5 558	2 612	1 045	3 461	1 413
Michigan -----	606	2 777	4 682	2 203	870	2 998	1 238
Minnesota -----	273	1 348	2 480	969	390	1 430	668
Mississippi -----	59	479	841	463	164	488	211
Missouri -----	353	1 830	3 012	1 567	619	1 912	810
Montana -----	66	(S)	(S)	(S)	(S)	(S)	(S)
Nebraska -----	69	272	440	236	98	294	130
Nevada -----	81	545	931	536	208	578	234
New Hampshire -----	298	1 260	2 056	1 049	345	1 289	530
New Jersey -----	666	4 139	7 460	3 447	1 425	4 270	1 913
New Mexico -----	40	186	326	182	72	191	83
New York -----	880	5 897	10 534	4 647	1 949	5 997	2 670
North Carolina -----	307	1 834	3 038	1 695	658	1 969	827
North Dakota -----	63	245	352	173	*57	238	95
Ohio -----	753	3 887	6 577	3 178	1 252	4 054	1 732
Oklahoma -----	104	480	796	491	176	464	209
Oregon -----	174	550	960	414	165	571	246
Pennsylvania -----	887	5 136	9 027	4 197	1 705	5 347	2 313
Rhode Island -----	105	381	623	285	103	420	170
South Carolina -----	112	774	1 511	713	326	754	382
South Dakota -----	*26	130	276	106	45	123	68
Tennessee -----	195	1 352	2 280	1 281	498	1 382	576
Texas -----	528	3 285	5 435	3 346	1 280	3 240	1 335
Utah -----	92	443	735	399	125	419	160
Vermont -----	168	732	1 288	545	229	744	311
Virginia -----	427	3 052	5 289	2 790	1 148	3 131	1 341
Washington -----	278	1 267	2 158	1 199	459	1 274	560
West Virginia -----	133	363	572	275	112	374	150
Wisconsin -----	313	1 632	3 003	1 347	541	1 704	818
Wyoming -----	45	(S)	(S)	(S)	(S)	(S)	(S)

¹Construction workers during pay periods including 12th of March, May, August, and November.

Payroll by State: 1987

July to September		October to December		Relative standard error of estimate (percent) for column—												Location of establishment
Construction workers ¹	Hours worked (thousands)	Construction workers ¹	Hours worked (thousands)	B	C	D	E	F	G	H	I	J	K			Location of establishment
H	I	J	K													
86 598	39 126	80 439	35 100	1	1	1	1	1	1	1	1	1	1	1	1	U.S.
874	409	714	328	11	13	12	14	11	12	11	12	11	11	14	14	AL
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	AK
572	219	493	193	14	18	14	17	14	18	14	18	14	19	15	21	AZ
533	234	525	200	13	16	13	17	12	16	12	16	16	17	16	16	AR
8 681	3 986	8 217	3 493	3	3	4	4	3	3	2	2	3	3	3	4	CA
1 303	573	1 270	493	9	12	9	12	9	12	9	13	9	9	9	13	CO
2 306	1 160	2 189	1 066	2	9	2	4	3	4	3	2	2	4	2	9	CT
623	228	614	196	(W)	(D)	(W)	(D)	(W)	(D)	(W)	(W)	(W)	(W)	(W)	3	DE
42	23	45	26	4	6	5	6	5	6	5	6	5	6	4	15	DC
4 602	2 118	4 317	2 011												6	FL
1 730	656	1 606	591	8	11	8	10	8	12	9	11	8	8	10	10	GA
158	73	126	62	30	38	33	42	26	33	35	42	27	27	36	36	HI
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	7	ID
3 032	1 300	2 926	1 275	5	6	5	7	6	7	5	6	5	6	5	7	IL
1 877	911	1 835	796	7	9	7	10	7	9	7	8	7	8	8	9	IN
378	176	402	175	19	22	24	20	18	23	16	22	20	20	23	23	IA
886	375	779	303	8	11	9	13	8	11	8	10	9	10	9	11	KS
1 060	421	954	347	8	11	9	12	8	11	8	11	8	11	9	12	KY
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	14	LA
1 178	656	1 128	539	11	14	11	15	12	13	12	14	11	14	11	14	ME
2 824	1 369	2 781	1 292	4	4	4	5	4	5	4	4	4	4	4	4	MD
3 727	1 581	3 557	1 517	5	6	5	7	6	7	6	7	6	7	6	6	MA
3 066	1 371	2 842	1 202	5	7	6	7	6	7	6	7	6	7	5	7	MI
1 578	784	1 413	636	6	8	7	8	7	8	7	9	6	8	6	9	MN
510	226	455	238	16	21	19	24	17	22	15	21	16	21	16	20	MS
2 088	862	1 754	720	8	10	9	10	8	10	9	11	8	8	10	10	MO
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	MT	
301	111	259	100	21	33	23	35	22	35	20	32	20	32	20	33	NE
544	263	521	224	11	10	15	16	11	10	8	10	8	10	12	11	NV
1 466	623	1 234	556	9	11	10	12	10	12	10	12	10	12	10	13	NH
4 516	2 153	4 324	1 967	4	5	5	5	5	5	5	4	5	4	5	5	NJ
188	84	185	85	21	32	22	34	20	32	22	32	22	32	21	32	NM
6 602	3 101	6 343	2 812	4	6	4	6	4	6	4	6	4	6	4	6	NY
1 941	843	1 729	708	9	11	10	11	9	12	9	11	9	11	9	11	NC
284	110	283	89	22	32	27	43	22	33	23	31	23	31	23	32	ND
4 366	1 928	3 949	1 664	4	6	5	6	4	6	4	6	4	6	5	6	OH
465	196	501	213	17	28	18	29	17	28	16	29	17	29	17	29	OK
625	275	591	273	13	16	14	18	13	17	14	19	15	19	15	18	OR
5 701	2 598	5 298	2 410	3	5	4	5	4	5	4	5	4	5	4	5	PA
437	185	382	164	12	13	14	15	12	13	14	16	14	16	14	12	RI
864	422	764	379	12	15	12	16	12	15	12	15	12	15	11	15	SC
143	83	149	79	24	25	23	25	25	27	25	26	26	27	26	27	SD
1 435	635	1 309	569	7	9	7	10	7	9	6	8	7	8	7	8	TN
3 451	1 491	3 102	1 328	7	7	7	8	7	7	7	7	8	7	8	8	TX
525	230	428	218	12	17	14	18	12	15	11	16	12	16	12	24	UT
846	385	792	362	12	18	12	19	12	18	12	17	12	14	12	19	VT
3 289	1 445	2 999	1 354	6	8	6	9	6	8	5	8	6	8	7	8	VA
1 335	605	1 260	534	6	9	7	9	7	9	6	9	6	9	7	9	WA
451	170	353	139	16	23	20	27	16	22	14	22	16	25	16	25	WV
1 823	894	1 656	748	8	10	8	10	8	10	8	10	8	10	8	11	WI
(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)	WY

Table 10. **Value of Construction Work for Establishments With Payroll by Location of Construction Work: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of construction work	1987						1982 construction receipts for work done in this State ¹	Percent change 1987 (col A) to 1982 (col F)	Relative standard error of estimate (percent) for column—						
	Value of construction work done in this State ¹	Construction work done by establishments located in this State		Construction work done by establishments not located in this State											
		Number	Value of construction work	Number	Value of construction work	A	B	C	D	E	F	G	A	C	E
United States	8 244 398	13 273	7 852 678	1 306	391 720	8 181 330	.8	1	1	1	5				
Alabama	80 188	123	63 717	37	(S)	116 164	-31.0	20	10	(S)					
Alaska	31 159	78	24 753	*11	6 406	138 471	-77.5	21	24	35					
Arizona	68 537	137	63 655	*12	4 881	141 840	-51.7	17	18	12					
Arkansas	38 898	97	34 544	7	4 354	67 874	-42.7	10	11	(W)					
California	1 203 258	889	1 193 761	13	9 497	769 626	56.3	2	2	19					
Colorado	95 066	285	90 163	10	4 902	223 388	-57.4	8	9	13					
Connecticut	244 545	354	238 417	44	6 128	158 188	54.6	8	8	8					
Delaware	56 534	24	48 805	60	*7 728	25 755	119.5	7	3	48					
District of Columbia	13 885	4	(D)	49	(D)	24 789	-44.0	2	(D)	(D)					
Florida	405 148	540	387 462	19	17 685	402 931	.6	4	4	11					
Georgia	123 262	255	117 554	17	5 707	120 690	2.1	7	7	21					
Hawaii	*29 872	27	(D)	1	(D)	52 296	-42.9	46	(D)	(D)					
Idaho	5 311	28	5 114	*22	197	23 608	-77.5	32	33	21					
Illinois	355 436	461	331 124	13	24 311	325 243	9.3	4	4	(W)					
Indiana	154 456	395	148 116	42	6 340	175 809	-12.1	6	7	20					
Iowa	29 375	77	28 563	*18	812	83 695	-64.9	15	15	20					
Kansas	65 338	133	57 200	23	8 138	92 982	-29.7	11	12	18					
Kentucky	81 060	222	70 843	37	10 217	112 947	-28.2	7	8	11					
Louisiana	35 646	102	29 979	51	5 666	252 349	-85.9	12	14	2					
Maine	92 167	200	89 957	*14	2 209	75 684	21.8	11	11	28					
Maryland	250 979	254	239 184	27	11 795	132 617	89.3	4	4	1					
Massachusetts	416 789	579	399 858	49	16 931	184 263	126.2	5	5	6					
Michigan	301 088	606	297 712	27	3 375	192 214	56.6	4	4	24					
Minnesota	167 133	273	166 459	*14	*674	141 570	18.1	5	5	62					
Mississippi	30 894	58	(D)	2	(D)	110 724	-72.1	20	(D)	(D)					
Missouri	162 175	353	150 235	28	11 939	147 873	9.7	6	6	20					
Montana	16 564	58	12 094	*18	4 469	35 856	-53.8	16	20	28					
Nebraska	19 094	69	(D)	1	(D)	82 968	-77.0	14	(D)	(D)					
Nevada	86 898	81	85 613	3	1 284	43 403	100.2	6	6	29					
New Hampshire	150 087	298	138 526	39	11 560	44 305	238.8	13	14	19					
New Jersey	449 510	657	433 020	60	16 490	231 720	94.0	3	3	23					
New Mexico	11 361	32	(D)	2	(D)	57 187	-80.1	12	(D)	(D)					
New York	608 608	878	589 928	38	18 680	374 278	62.6	4	4	8					
North Carolina	159 454	307	151 327	14	8 127	115 480	38.1	10	11	1					
North Dakota	26 702	63	12 420	*23	14 281	67 672	-60.5	12	22	11					
Ohio	359 869	739	349 928	69	9 940	304 994	18.0	4	4	9					
Oklahoma	28 519	95	26 721	25	*1 797	181 085	-84.3	14	15	45					
Oregon	57 912	173	(D)	2	(D)	(D)	(D)	15	(D)	(D)					
Pennsylvania	490 955	870	468 884	126	22 070	360 907	36.0	4	3	33					
Rhode Island	41 122	105	36 364	31	4 757	32 273	27.4	11	12	15					
South Carolina	61 392	112	58 150	*11	3 242	93 438	-34.3	9	9	22					
South Dakota	11 912	26	(D)	2	(D)	26 888	-55.7	23	(D)	(D)					
Tennessee	118 543	195	107 900	37	10 643	123 793	-4.2	13	14	26					
Texas	264 014	504	248 790	22	15 223	891 124	-70.4	6	6	4					
Utah	43 976	84	(D)	1	(D)	69 386	-36.6	27	(D)	(D)					
Vermont	63 691	168	63 691	-	-	(D)	(D)	12	12	(D)					
Virginia	276 642	421	264 261	52	12 380	201 910	37.0	6	6	6					
Washington	154 919	278	137 659	27	17 259	150 251	3.1	6	7	4					
West Virginia	33 627	133	30 356	23	3 270	65 355	-48.5	15	17	4					
Wisconsin	145 763	308	143 183	*16	2 579	130 861	11.4	6	7	31					
Wyoming	25 041	45	(D)	2	(D)	73 854	-66.1	9	(D)	(D)					

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 11. **Dollar Value of Business Done for Establishments With Payroll by Kind of Business Activity: 1987 and 1982**

[Thousand dollars. Detail may not add to total due to rounding. Based on their primary business activity or combination of activities, establishments were classified into this specific industry. These establishments, however, may also be engaged in other kinds of business activities. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Primary and other kinds of business activities	Dollar value of business done ¹		Relative standard error of estimate (percent)	
	1987	1982	1987	1982
All kinds of business	8 452 371	8 472 648	1	1
General building contractor	68 124	48 148	12	7
Highway and street contractor	155 148	216 518	4	1
Paving contractor	59 508	210 989	7	2
Heavy construction	442 120	336 193	3	2
Heavy construction contractor	287 849	(NA)	4	(NA)
Excavating and earthmoving contractor	154 271	(NA)	5	(NA)
Subdividing land owned by others	649 636	311 325	4	3
Concrete construction	58 820	111 001	4	3
Excavation contractor, for buildings	4 811 468	5 682 335	1	1
Foundation contractor, digging of	1 344 168	674 888	2	2
Wrecking and demolition construction	104 314	55 858	4	3
Other construction activities	319 427	521 637	7	6
Rental of construction machinery or equipment to others	70 652	53 912	4	3
Other activities	67 412	(S)	4	(S)
Kind of business activity, n.s.k.	301 274	(S)	4	(S)

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 12. Selected Industry Ratios For Establishments With Payroll: 1987 and 1982

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Selected statistics	1987	1982	Relative standard error of estimate (percent) for 1987	
AVERAGE PER ESTABLISHMENT				
Number of employees**	7.1	6.9	1	
Number of construction workers	5.9	5.9	1	
Number of all other employees	1.2	(NA)	1	
Payroll, all employees	\$1,000--	153.5	109.5	1
Payroll, construction workers	do--	119.0	89.4	1
Payroll, other employees	do--	34.4	20.1	1
Dollar value of business done	do--	629.7	431.3	1
Value of construction work ¹	do--	614.2	416.4	1
Cost of materials, components, supplies, and fuels	do--	148.4	108.0	1
Construction work subcontracted to others	do--	56.1	43.0	3
Rental cost for machinery, equipment, and buildings	do--	34.2	21.8	2
Capital expenditures, other than land	do--	35.3	20.6	3
Gross book value of depreciable assets	do--	249.6	264.8	2
AVERAGE PER EMPLOYEE				
Payroll, all employees	do--	21.6	15.8	1
Dollar value of business done	do--	88.7	62.3	1
Value added††	do--	59.9	40.5	1
AVERAGE PER CONSTRUCTION WORKER				
Payroll, construction workers	do--	20.2	15.3	1
Value of construction work ¹	do--	104.1	71.1	1
Construction worker hours	do--	1 731.0	1 598.3	1
AVERAGE PER OTHER EMPLOYEE				
Payroll, other employees	\$1,000--	28.7	(NA)	1
AVERAGE PER DOLLAR VALUE OF CONSTRUCTION WORK¹				
Payroll, all employees		.250	.263	1
Cost of materials, components, supplies, and fuels		.242	.259	1
Cost of construction work subcontracted to others		.091	.103	2
Rental cost for machinery, equipment, and buildings		.056	.052	2

¹In earlier censuses, construction receipts only were collected. In 1987, the value of construction work was collected to better measure actual construction activity done during the year.

Table 13. Selected Industry Ratios for Establishments With Payroll by State: 1987

[For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendixes]

Location of establishment	Average number of employees** per establishment	Payroll per employee (\$1,000)	Construction worker hours per construction worker	Value of construction work per construction worker (\$1,000)	Average per dollar of value of construction work			
					Payroll, all employees	Cost of materials, components, supplies, and fuels	Cost of construction work subcontracted to others	Rental cost for machinery, equipment, and buildings
United States -----	7.1	21.6	1 731.0	104.1	.250	.242	.091	.056
Alabama -----	8.2	17.5	1 799.5	83.7	.266	(D)	(D)	.033
Alaska -----	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Arizona -----	5.1	18.8	1 519.8	112.5	.203	.140	.091	.045
Arkansas -----	6.1	15.2	1 611.9	77.9	.238	.207	.173	.051
California -----	10.8	27.5	1 738.6	148.0	.220	.213	.107	.104
Colorado -----	5.4	19.2	1 618.9	76.7	.318	.257	.082	.041
Connecticut -----	7.3	26.3	1 953.3	117.4	.277	.253	.074	.062
Delaware -----	24.9	21.9	1 438.0	(D)	(D)	(D)	(D)	(D)
District of Columbia -----	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Florida -----	9.8	18.2	1 831.6	89.1	.248	.270	.092	.052
Georgia -----	7.3	19.1	1 480.4	79.0	.277	.228	.098	.037
Hawaii -----	5.9	28.8	1 934.4	*241.2	*.155	*.083	(S)	*.043
Idaho -----	(S)	(S)	(D)	(D)	(D)	(D)	(D)	(D)
Illinois -----	7.1	26.5	1 668.7	121.0	.262	.221	.089	.041
Indiana -----	5.3	19.2	1 816.4	87.6	.267	.264	.062	.034
Iowa -----	5.7	16.8	1 647.4	83.2	.243	.250	.058	.037
Kansas -----	7.4	19.1	1 568.2	97.0	.245	.202	.111	.054
Kentucky -----	5.2	16.6	1 522.4	78.5	.252	.293	.053	.065
Louisiana -----	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Maine -----	6.4	17.4	2 048.0	89.5	.233	.271	.072	.046
Maryland -----	12.2	24.1	1 840.8	99.4	.282	.174	.108	.070
Massachusetts -----	7.3	25.8	1 664.6	126.8	.258	.255	.087	.060
Michigan -----	5.6	22.9	1 686.0	112.4	.249	.270	.073	.042
Minnesota -----	6.2	27.1	1 839.8	136.7	.249	.247	.092	.041
Mississippi -----	9.7	16.8	1 755.7	76.6	.262	.266	.119	.051
Missouri -----	6.2	20.1	1 645.9	85.5	.281	.240	.069	.037
Montana -----	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)
Nebraska -----	4.8	14.8	1 617.6	71.0	.253	.193	.051	*.017
Nevada -----	8.4	26.2	1 708.3	157.3	.209	.205	.217	.023
New Hampshire -----	5.3	20.5	1 631.7	113.8	.224	.237	.068	.031
New Jersey -----	7.3	23.5	1 802.4	109.2	.254	.256	.092	.038
New Mexico -----	5.6	14.7	1 752.7	59.0	.301	.175	*.016	.036
New York -----	8.0	22.1	1 786.3	101.8	.259	.245	.075	.056
North Carolina -----	7.1	15.9	1 656.5	83.5	.226	.224	.164	.035
North Dakota -----	4.9	11.1	1 436.7	51.0	.272	.319	*.042	*.021
Ohio -----	6.2	20.0	1 692.1	93.1	.258	.269	.083	.040
Oklahoma -----	5.6	16.1	1 658.3	57.1	.343	.183	.035	.026
Oregon -----	3.9	21.5	1 745.5	112.3	.234	.237	.048	.070
Pennsylvania -----	7.0	21.0	1 757.6	99.9	.252	.250	.089	.040
Rhode Island -----	4.5	23.0	1 635.2	105.7	.268	.220	.048	.084
South Carolina -----	8.3	16.8	1 952.2	83.7	.241	.188	.083	.054
South Dakota -----	*6.3	21.2	2 123.1	89.8	.297	.274	*.006	*.031
Tennessee -----	8.1	16.4	1 686.4	84.2	.229	.195	.106	.047
Texas -----	7.5	16.9	1 654.5	81.2	.252	.288	.110	.041
Utah -----	5.9	20.9	1 659.1	125.1	.205	.313	.096	.028
Vermont -----	5.2	18.9	1 759.6	91.5	.245	.269	.042	.030
Virginia -----	8.3	19.1	1 733.0	90.5	.245	.261	.084	.049
Washington -----	5.5	23.9	1 703.2	108.7	.264	.253	.073	.085
West Virginia -----	3.2	17.2	1 575.8	88.7	.230	.299	.071	*.049
Wisconsin -----	6.4	22.7	1 840.1	105.6	.264	.260	.096	.043
Wyoming -----	(S)	(S)	(S)	(S)	(S)	(S)	(S)	(S)

APPENDIX A.

Explanation of Terms

Construction—Is composed of three broad categories:

1. **New construction**—Includes the complete, original erection of structures and essential service facilities and the initial installation of integral equipment such as elevators, and plumbing, heating, and air-conditioning supplies and equipment.
2. **Additions, alterations or reconstruction**—Includes construction activity making structural changes to existing facilities. Generally, this type of activity is considered a capital investment in the property.
3. **Maintenance and repair**—Includes construction done for the purpose of upkeep of property rather than additional investment in the property.

Examples of the general distinction between maintenance and repair and reconstruction are provided here: roof repairs, including the replacement of shingles, gutters, etc., are classified under maintenance and repairs. A complete reroofing, however, is classified as reconstruction.

Number of establishments in business during year—Includes all establishments that were in business at any time during the year. It covers all full-year and part-year operations. Construction establishments which were inactive or idle for the entire year were not included.

Proprietors and working partners—These data were not collected on the census report forms. The data shown are based on crediting each sole proprietorship establishment with one active proprietor and each partnership establishment with two working partners.

All employees—Comprise all full-time and part-time employees on the payrolls of construction establishments, who worked or received pay for any part of the pay period including the 12th of March, May, August, and November. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods. Officers of corporations are included, but proprietors and partners of unincorporated firms are not.

All employees is the sum of all employees during the pay periods including the 12th of March, May, August, and November, divided by 4.

Construction workers—Includes all workers up through the working foreman level directly engaged in construction operations, such as painters, carpenters, plumbers, and electricians. Included are journeymen, mechanics, apprentices, laborers, truck drivers and helpers, equipment

operators, and on-site record keepers and security guards. Supervisory employees above the working foreman level are excluded from this category but are included in the "other employees" category.

Other employees—Includes employees in executive, purchasing, accounting, personnel, professional, technical activities, and routine office functions. Also included are supervisory employees above the working foreman level.

Construction worker hours—Includes the total number of hours worked by construction workers. Construction worker hours were collected for each of the four quarters of 1987.

Payroll—Includes the gross earnings paid in the calendar year 1987 to all employees on the payroll of construction establishments. It includes all forms of compensation such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of these establishments, if a corporation, but excludes payments to the proprietor or partners, if an unincorporated concern.

Employer costs for fringe benefits (supplemental labor costs)—Represents expenditures made by the employer during 1987 for legally required and voluntary fringe benefit programs for employees.

Legally required contributions—Include Social Security contributions, unemployment compensation, workman's compensation, and State temporary disability payments.

Voluntary payments—Include life insurance premiums, pension plans, insurance premiums on hospital and medical plans, welfare plans, and union negotiated benefits.

Dollar value of business done comprises the following detail:

Value of construction work done—Includes all value of construction work done during 1987 for construction work performed by general contractors, special trades contractors, subcontractors, and land development and improvement work. Included is new construction, additions and alterations or reconstruction, and maintenance and repair construction work. Also included is the value of any construction work done by the reporting establishments for themselves.

Builders were instructed to include the value of buildings and other structures built or being built for sale in 1987 but not sold. They were to include the costs of such construction plus normal profit. Also included is the cost of construction work done on buildings for rent or lease.

Establishments engaged in the sale and installation of such construction components as plumbing, heating, and central air conditioning supplies and equipment; lumber and building materials; paint, glass, and wallpaper; and electrical and wiring supplies, elevators or escalators, etc., were instructed to include both the value for the installation and the receipts covering the price of the items installed.

Excluded was the cost of industrial and other specialized machinery and equipment which are not an integral part of a structure.

Land receipts—Includes receipts from the sale of land, whether held for sale or sold in connection with the sale of houses and other structures. It excludes the value of any improvements made to the land prior to the sale. (That value was to be included in the value of construction work done.)

Other business receipts—Includes business receipts not reported as value of construction work done or land receipts. The item includes business receipts from retail and wholesale trade, rental of equipment, manufacturing, transportation, legal service, insurance, finance, rental of property and other real estate operations, and other nonconstruction activities. Receipts for separately definable architectural and engineering work for others are also included here.

Excluded was the value of construction work done and receipts from other business operations in foreign countries and non-operating income such as interest and dividends.

Net value of construction work—Derived for each establishment by subtracting the costs for construction work subcontracted to others from the value of construction work done. (For a further explanation see "Duplication in Value of Construction Work" section in the Introduction.)

Value added—Derived for each establishment, value added is equal to dollar value of business done, less costs for construction work subcontracted to others, and costs for materials, components, supplies and fuels. For SIC 6552 and SIC 1531, for which land receipts are significant, land receipts are also subtracted from dollar value of business done. (For a further explanation see "Duplication in Value of Construction Work" section in the Introduction.)

Selected costs—Represents the costs for materials, components, and supplies; costs for construction work subcontracted to others; and costs for selected power, fuels, and lubricants. Capital expenditures and rental costs for machinery, equipment, and structures are shown elsewhere.

Costs for materials, components, and supplies include:

- total costs to reporting establishments during 1987 for the purchase of all materials, components, and supplies, except fuels. (Supplies include expendable tools which are charged to current accounts.)
- freight and other direct charges should represent only amount paid after discounts, and the value of materials, components, and supplies obtained from other establishments of the respondent's company.
- costs for materials, components, and supplies used by the reporting establishments in the construction or reconstruction of buildings/structures for themselves which are chargeable to their fixed assets accounts, are included in this item as are costs for materials bought and resold to others.
- costs made for direct purchases of materials, components, and supplies even though the purchases were subsequently provided to subcontractors for their use.

Excluded from this item are:

- industrial and other specialized machinery and equipment, such as printing presses; computer systems; etc., which are not an integral part of a structure
- materials furnished to contractors by the owners of projects.

Costs for construction work subcontracted to others include:

- all costs during 1987 for construction work subcontracted out to other construction contractors.

Excluded from this item are:

- The costs to the reporting establishment for its purchases of materials, components, and supplies, provided to a subcontractor for his use. Such costs are reported under a separate category, "costs for materials, components, and supplies."
- costs for the rental of machinery or equipment.

Costs for selected power, fuels, and lubricants include:

- costs for fuels, lubricants, and electric energy purchased during the year from other companies, or received from other establishments of the company.
- costs for natural and manufactured gas, fuel oil, coal and coke products, etc.

Rental costs for machinery, equipment, and buildings—Includes all costs during 1987 for renting or leasing construction machinery and equipment, transportation equipment, production equipment, office equipment, furniture and fixtures, scaffolding, office space, and buildings. It

excludes costs for the rental of land. It also excludes costs under agreements which, in effect, are conditional sales contracts such as capital leases. Such costs are included in "capital expenditures."

Selected purchased services—Includes all costs during 1987 for communication services purchased from other companies or from other establishments of the company. It also includes the cost of all repairs made to structures and equipment by outside companies, or from other establishments of the same company. It includes only the cost of that repair necessary to maintain property and equipment. It excludes the cost of improvements that increase the value of property, or the cost of adapting it for another use. Such costs are included in "capital expenditures".

Assets and depreciation—Refers to the original cost of all fixed tangible assets such as buildings and other structures (offices, shops, etc.); stationary machinery (generators, shop equipment, etc.); mobile machinery (tractors, trucks, etc.); and other equipment (office furniture and fixtures, etc.). Not included are such items as current assets, depletable assets, intangible assets, and nondepreciable assets.

Data on assets and depreciation were collected separately for: (1) buildings and other structures, additions, and related facilities; and, (2) machinery and equipment.

Respondents were also asked to report capitalized expenditures, depreciation charges, and the gross value of assets sold, retired, scrapped, destroyed, etc., during 1987.

Capital expenditures—Refers to all costs actually incurred during 1987 which were or would be chargeable to the fixed assets accounts of the reporting establishments and which were of the type for which depreciation accounts are ordinarily maintained. These expenditures cover the acquisition, the construction, and the major alteration of the reporting establishment's own buildings and other structures, whether purchased, constructed under contract, or constructed by the reporting establishment's own forces; and the acquisition of machinery and equipment.

If leasing arrangements met the criteria set down by the Financial Accounting Standards Board (FASB) for a capital lease, respondents were instructed to report the original cost or market value of that equipment or building as a fixed asset and capital expenditure if acquired during 1987.

If capital expenditures were not recorded directly at the establishment level but handled centrally at the company or division level, respondents were requested to report appropriate estimates for the individual establishments.

Inventories—Includes all of the materials and supplies that are owned regardless of where they are held. Excludes materials which are owned by others, but held by the reporting establishment.

Builders who built on their own account for sale were requested to report work in progress and finished units not sold for buildings and other structures built for sale.

Inventories of multi-establishment companies were instructed to be reported by the establishment that is responsible for the inventories even if these inventories were held at a separate location.

Ownership of construction projects—This item shows the distribution of the value of construction work done by ownership of the project, that is, Government owned or privately owned. This classification relates to the ownership of the projects or work undertaken during the construction phase. Government owned projects are shown separately for Federal, and State and local governments.

Value of construction work subcontracted in from others—Includes the value of construction work during 1987 for work done by reporting establishments for other construction contractors or builders. Establishments were asked to report the approximate percent of total value of construction work accounted for by such work, and the percentages reported were applied to the reported value of construction work to develop a value for this item.

Types of construction—This item provides data by the types of buildings, structures, or other facilities being constructed or worked on by construction establishments in 1987. Respondents were instructed that each building, structure, or other facility should be classified in terms of its function. For example, a restaurant building was to be classified in the restaurant category whether it was designed as a commercial restaurant building or an auxiliary unit of an educational institution. If respondents worked on more than one type of building or structure in a multibuilding complex, they were instructed to report separately for each building or type of structure. If they worked on a building that had more than one purpose, i.e., office and residential, or commercial, they were to classify the building by major purpose.

In addition all respondents were requested to report the percentage of the value of construction work done for new construction, additions, alterations, or reconstruction, and maintenance and repair work for each of these types. See the definition of "Construction" for the meanings of these terms.

Building construction:

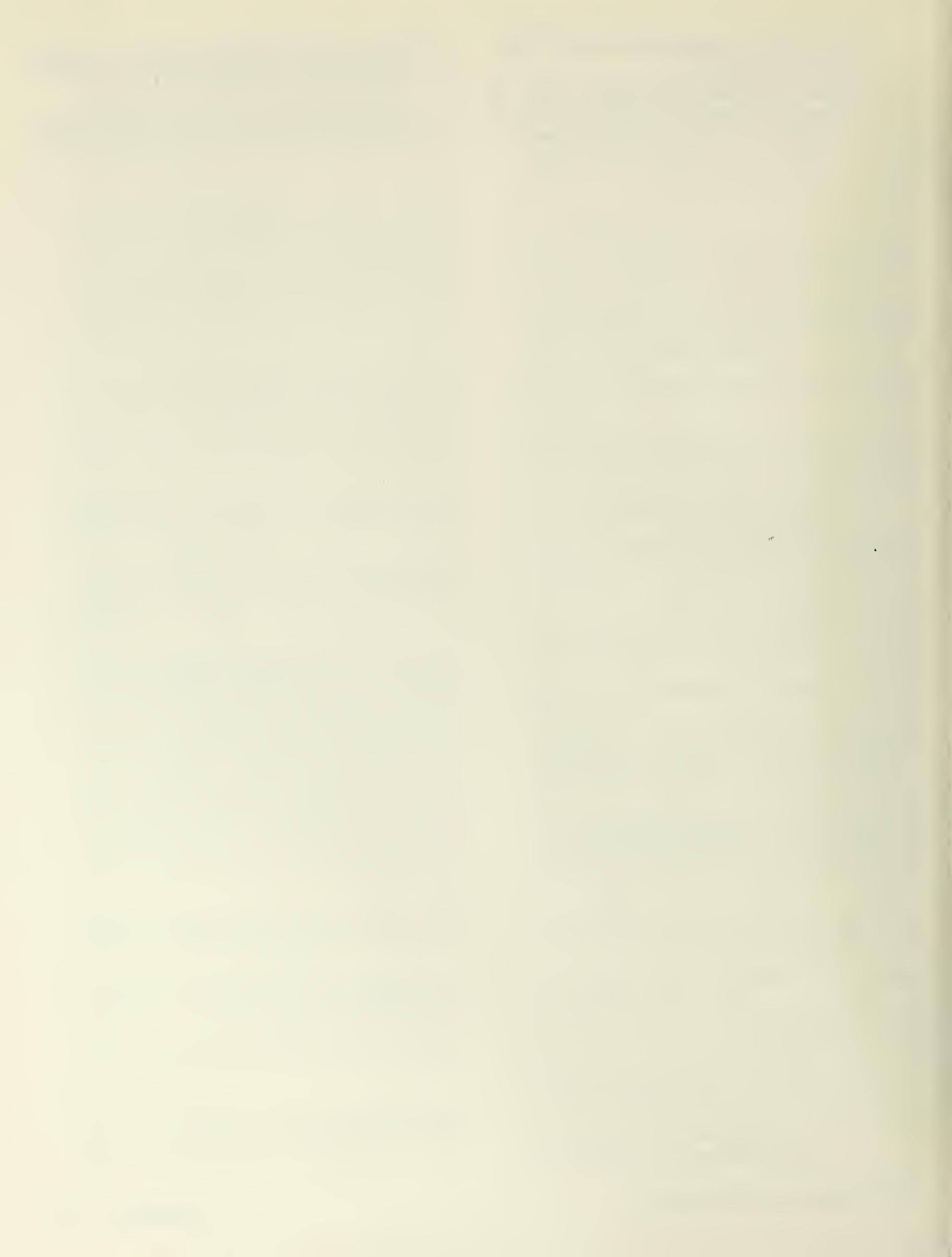
- **Single-family houses, detached**—Includes all residential buildings constructed for one family use.
- **Single-family houses, attached (include townhouses)**—Includes all residential buildings with two or more living quarters side by side, completely independent of one another, and separated by an unbroken wall from ground to roof.
- **Apartment buildings with two or more apartments**—Includes high-rise, low-rise, or any structures containing two or more housing units (excluding attached single-family houses and townhouses described above).
- **Hotels and motels**—Includes hotels, motels, and tourist cabins intended for transient accommodations.

- **Other residential buildings**—Includes dormitories, fraternity and sorority houses, nurses homes, and other nonhousekeeping residential structures.
- **Office buildings**—Includes all buildings which are used primarily for office space or for government administrative offices. Also included are banks or financial buildings which are three stories or more.
- **Other commercial buildings, such as stores, restaurants, and automobile service stations**—Includes all buildings which are intended for use primarily in the wholesale, retail, and service trades. For example, shopping centers, department stores, drug stores, restaurants, public garages, auto service stations, and one or two story bank or financial institutions.
- **Industrial buildings**—Includes all industrial buildings and plants which are used to house production and assembly activities. Heavy industrial facilities such as blast furnaces, petroleum refineries, chemical complexes, etc., are not included in this category, but under nonbuilding construction.
- **Warehouses**—Includes commercial warehouses, cold storage plants, grain elevators, mini-warehouses, and other such storage buildings.
- **Religious buildings**—Includes all buildings which are intended for religious services or functions, such as churches, synagogues, convents, monasteries, and seminaries.
- **Educational buildings**—Includes all buildings which are used directly in administrative and instructional activities, such as colleges, universities, elementary and secondary schools, correspondence, commercial, and trade schools. Libraries, museums, and art galleries, as well as laboratories which are not a part of a manufacturing establishment, are also included.
- **Hospitals and institutional buildings**—Includes all buildings which are intended to provide hospital and institutional care, such as clinics, infirmaries, sanitariums, nursing homes, homes for the aged, and orphanages.
- **Farm buildings, nonresidential**—Includes nonresidential farm buildings such as barns, poultry houses, implement sheds, and farm silos.
- **Amusement, social, and recreational buildings**—Includes buildings which are used primarily for entertainment, social and recreational activities, such as sports arenas, theaters, music halls, golf and country club buildings, skating rinks, bowling alleys, and indoor swimming pools.
- **Other nonresidential buildings**—Includes nonresidential buildings which are not classified elsewhere, such as fire stations, prisons, civic centers, bus and air passenger terminals and hangars.

Nonbuilding construction:

- **Highways, streets and related work, such as installation of guardrails, highway signs, etc.**—Includes streets, roads, alleys, sidewalks, curbs and gutters, culverts, right-of-way drainage, erosion control and lighting. Also includes earthwork protective structures when used in connection with road improvements.
- **Outdoor swimming pools**—Includes wading pools and reflecting pools.
- **Recreational facilities**—Includes athletic fields, golf courses, outdoor tennis courts, trails, and camps.
- **Bridges and elevated highways**—Includes viaducts and overpasses; roads, highways, railroads, and causeways built on structural supports.
- **Tunnels**—Includes highway, pedestrian, and railroad tunnels.
- **Railroad construction**—Includes the construction of railroad beds, tracks, freight yards, and signal towers.
- **Subway construction**—Includes urban mass transit subway systems above or below ground.
- **Dam and reservoir construction**—Includes hydroelectric, water supply, and flood control dams and reservoirs.
- **Marine construction**—Includes dredging, underwater rock removal, breakwaters, navigational channels, jetties, and locks.
- **Harbor and port facilities**—Includes docks, piers, and wharves.
- **Conservation and development construction**—Includes land reclamation, irrigation projects, drainage canals, levees, and flood control projects.
- **Power and communication transmission lines, towers, and related facilities**—Includes electric power lines, telephone and telegraph lines, fiber optic cables, cable television lines, television and radio towers, electric light and power facilities.
- **Power plants, except nuclear**—Includes electric and steam generating plants.
- **Power plants, nuclear**—Includes atomic energy plants, and nuclear reactors.
- **Sewers, sewerlines, and related facilities**—Includes sanitary and storm sewers, and related facilities.
- **Sewage treatment plants**—Includes sewage treatment and waste disposal plants.
- **Water mains and related facilities**—Includes water supply systems and related facilities.

- **Water treatment plants**—Includes water filtration and water softening plants.
- **Pipeline construction other than sewer or waterlines**—Includes pipelines for the transmission of gas, petroleum products, and liquefied gases.
- **Blast furnaces, petroleum refineries, chemical complexes, etc.**—Includes coke ovens, and mining appurtenances such as tipples and washeries.
- **Other nonbuilding construction**—Includes all types of nonbuilding construction, not included elsewhere.



APPENDIX B.

Standard Industrial Classification Titles for Industry Groups and Industries

SIC code	Industry titles	SIC code	Industry titles
15	BUILDING CONSTRUCTION—GENERAL CONTRACTORS AND OPERATIVE BUILDERS	17	CONSTRUCTION—SPECIAL TRADE CONTRACTORS—Con.
152	General Building Contractors—Residential Buildings	173	Electrical Work Special Trade Contractors
1521	General Contractors—Single-Family Houses	1731	Electrical Work Special Trade Contractors
1522	General Contractors—Residential Buildings, Other Than Single-Family	174	Masonry, Stone Work Tile Setting, and Plastering Special Trade Contractors
153	Operative Builders	1741	Masonry, Stone Setting, and Other Stone Work Special Trade Contractors
1531	Operative Builders	1742	Plastering, Drywall, Acoustical, and Insulation Work Special Trade Contractors
154	General Building Contractors—Nonresidential Buildings	1743	Terrazzo, Tile, Marble, and Mosaic Work Special Trade Contractors
1541	General Contractors—Industrial Buildings and Warehouses	175	Carpentry and Floor Work Special Trade Contractors
1542	General Contractors—Nonresidential Buildings, Other Than Industrial Buildings and Warehouses	1751	Carpentry Work Special Trade Contractors
16	HEAVY CONSTRUCTION OTHER THAN BUILDING CONSTRUCTION—CONTRACTORS	1752	Floor Laying and Other Floor Work Special Trade Contractors, Not Elsewhere Classified
161	Highway and Street Construction, Except Elevated Highways	176	Roofing, Siding, and Sheet Metal Work Special Trade Contractors
1611	Highway and Street Construction Contractors, Except Elevated Highways	1761	Roofing, Siding, and Sheet Metal Work Special Trade Contractors
162	Heavy Construction, Except Highway and Street Construction	177	Concrete Work Special Trade Contractors
1622	Bridge, Tunnel, and Elevated Highway Construction Contractors	1771	Concrete Work Special Trade Contractors
1623	Water, Sewer, Pipeline, and Communications and Powerline Construction	178	Water Well Drilling Special Trade Contractors
1629	Heavy Construction, Not Elsewhere Classified	1781	Water Well Drilling Special Trade Contractors
17	CONSTRUCTION—SPECIAL TRADE CONTRACTORS	179	Miscellaneous Special Trade Contractors
171	Plumbing, Heating, and Air-Conditioning Special Trade Contractors	1791	Structural Steel Erection Special Trade Contractors
1711	Plumbing, Heating, and Air-Conditioning Special Trade Contractors	1793	Glass and Glazing Work Special Trade Contractors
172	Painting and Paper Hanging Special Trade Contractors	1794	Excavation Work Special Trade Contractors
1721	Painting and Paper Hanging Special Trade Contractors	1795	Wrecking and Demolition Work Special Trade Contractors
		1796	Installation or Erection of Building Equipment, Special Trade Contractors, Not Elsewhere Classified
		1799	Special Trade Contractors, Not Elsewhere Classified
		6552	LAND SUBDIVIDERS AND DEVELOPERS, EXCEPT CEMETERIES

APPENDIX C. **Geographic Divisions and States**

NEW ENGLAND STATES

Connecticut
Maine
Massachusetts
New Hampshire
Rhode Island
Vermont

MIDDLE ATLANTIC STATES

New Jersey
New York
Pennsylvania

EAST NORTH CENTRAL STATES

Illinois
Indiana
Michigan
Ohio
Wisconsin

WEST NORTH CENTRAL STATES

Iowa
Kansas
Minnesota
Missouri
Nebraska
North Dakota
South Dakota

SOUTH ATLANTIC STATES

Delaware
District of Columbia
Florida
Georgia
Maryland

SOUTH ATLANTIC STATES—Con.

North Carolina
South Carolina
Virginia
West Virginia

EAST SOUTH CENTRAL STATES

Alabama
Kentucky
Mississippi
Tennessee

WEST SOUTH CENTRAL STATES

Arkansas
Louisiana
Oklahoma
Texas

MOUNTAIN STATES

Arizona
Colorado
Idaho
Montana
Nevada
New Mexico
Utah
Wyoming

PACIFIC STATES

Alaska
California
Hawaii
Oregon
Washington

PUBLICATION PROGRAM

1987 CENSUS OF CONSTRUCTION INDUSTRIES

The Census of Construction Industries is taken once every 5 years. The census covers all establishments engaged in construction, including:

- Building contractors
- Heavy construction contractors
- Special trade contractors (including plumbers, carpenters, painters, electricians)
- Land developers and subdividers

Data products in the Census of Construction Industries are issued in 4 publication series and in 3 other media:

- Printed reports [P]
- CD-ROM [C]
- Computer tape [T]
- Highlights online [+]

Preliminary Industry Series (CC87-I-1(P) through CC87-I-28(P))

(Available November 1988 through May 1989) [P]

Twenty-seven separate industry reports and a United States summary report, providing national statistics for establishments with payroll. Statistics shown for 1987 include:

- Number of establishments
- Number of employees
- Payroll
- Hours worked
- Value of construction work done, by type of structure
- Selected operating costs

Final Industry Series (CC87-I-1 through CC87-I-28)

(Available June 1989 through November 1989) [P] [C] [T] [+]

Twenty-seven separate industry reports and a United States summary report, providing statistics for the Nation and individual States on establishments with payroll. These reports update figures from the preliminary industry series (employment, payroll, value of construction, etc.) and provide measures of the following:

- Capital expenditures
- Inventories
- Industry profiles
- Assets
- Depreciation
- And much more

Geographic Area Series (CC87-A-1 through CC87-A-10)

(Available January 1990 through March 1990) [P] [C] [T] [+]

Nine reports on the construction industries, representing each census geographic division, and a United States summary report. Regional reports provide detailed data for States and metropolitan statistical areas.

Subject Report—Legal Form of Organization and Type of Operation (CC87-S-1)

(Available May 1990) [P]

One report providing selected national statistics for each industry by legal form of organization and type of operation. This report includes data for establishments with and without payroll. Data in this report include—

- Employment
- Payroll
- Value of construction work done
- Selected operating costs

OTHER ECONOMIC CENSUSES REPORTS

The Census of Construction Industries is part of the 1987 Economic Censuses. These are conducted at five-year intervals in years ending in 2 and 7 and consist of seven separate censuses:

- Census of Retail Trade
- Census of Wholesale Trade
- Census of Service Industries
- Census of Transportation
- Census of Manufactures
- Census of Mineral Industries
- Census of Construction

...plus several related programs: enterprise statistics; information on minority-owned and women-owned businesses; and the Census of Outlying Areas, including separate economic censuses of Puerto Rico and other outlying areas. The Census of Agriculture and Census of Governments are conducted separately.

HOW TO ORDER DATA PRODUCTS

Order forms for the specific reports and other data products may be obtained from Data User Services Division, Customer Services (Publications), Bureau of the Census, Washington, DC 20233. If you have any questions, call Census Customer Services 1-(301)-763-4100.



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